

FIG. 1

Alignment Report of Gram +&- 16S align.MEG, using Clustal method with Weighted residue weight table.
 Tuesday, November 27, 2001 4:14 PM

	10	20	30	40	50	60
Bautilis16S.SEQ	-----G-----	-----C-----	-----GAC-----	-----GT-----	-----T-----	56
Banthracis16S.SEQ	-----G-----	-----C-----	-----GA-----	-----GT-----	-----T-----	52
Efaecalis 16S.SEQ	-----CGAACCT-----	-----GCGGC-----	-----TCCAAACATGAGC-----	-----TCCTTCTC-----	-----GCTGCT-----	65
Lactis 16S.SEQ	-----TT-----	-----G-----	-----C-----	-----GAC-----	-----GT-----	63
Lmonocyt16S.SEQ	-----GCC-----	-----TCAGGTC-----	-----GACAC-----	-----GT-----	-----T-----	72
Saureus16S.SEQ	-----TTT-----	-----TATG-----	-----C-----	-----GA-----	-----GT-----	63
Smutans16S.SEQ	-----	-----	-----C-----	-----GAC-----	-----GT-----	55
Spneumon16S.SEQ	-----	-----	-----C-----	-----GAC-----	-----GT-----	52
Spyrogenes16S.SEQ	-----	-----	-----	-----	-----	0
Mavium16S.SEQ	-----	-----	-----	-----GT-----	-----T-----	25
Mtb16S.SEQ	-----TTT-----	-----GT-----	-----G-----	-----GAC-----	-----GT-----	64
Xcoli 0157 16S.SEQ	-----AAA-----	-----TTGAGGTTGATCAGGCTCAGTCAATGACGCTGGGGGAGG-----	-----CCTACACATGCAAT-----	-----	-----	62
Xpneumon16S.SEQ	-----	-----	-----NN-----	-----	-----	55
Aactinol16S.SEQ	-----	-----	-----	-----	-----T-----	60
Hinfluenzae 16S.SEQ	-----	-----N-----	-----	-----	-----T-----	62
Bronchiseptica 16S.SEQ	-----	-----	-----C-----	-----	-----G.T-----	63
Bparapertussis16S.SEQ	-----	-----	-----	-----	-----G.T-----	35
Bpertussis 16S.SEQ	-----	-----	-----C-----	-----	-----G.T-----	61
Bcepacia 16S.SEQ	-----T-----	-----	-----C-----	-----	-----T-----	63
Emallei 16S.SEQ	-----	-----	-----	-----	-----T-----	37
Bpseudomallei 16S.SEQ	-----TCT.G.TGCGTGTGAGCGCGCGCCAGTGTGATGATATCTGTAATCGGC-----	-----GC-----	-----C-----	-----	-----T-----	116
Xgonorrhoeae 16S.SEQ	-----	-----	-----C-----	-----	-----T-----	63
Nmening 16S.SEQ	-----	-----	-----C-----	-----	-----T-----	63
Paaruginosa 16S.SEQ	-----G-----	-----	-----C-----	-----	-----A-----	66
Vcholarae 16S.SEQ	-----	-----	-----C-----	-----	-----	60
Yenterocolitica 16S.SEQ	-----	-----	-----N-----	-----	-----	62

FIG. 2A-1

Alignment Report of Gram +&- 16S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:14 PM

FIG. 2A-2

FIG. 2A-3

Alignment Report of Gram +&- 16S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:14 PM

	290	300	310	320	330	340	350	360	370	380	390	400	
Brubillis16S.SEQ	...C.AC...	G..T.G...	G.....	G.....	C.....	A.....	C..C.G...	A..A..T...	C..G...A.C...	406			
Banthracis16S.SEQ	...C.AC...	G..T.G...	G.....	G.....	C.....	A.....	C..C.G...	A..A..T...	C..G...A.C...	404			
Efaecalis 16S.SEQ	...C.AC...	G..T.G...	G.....	G.....	C.....	A.....	C..C.G...	A..A..T...	C..G...A.C...	395			
Llactis 16S.SEQ	...C.AC...	G..T.G...	T..G.....	T..G.....	C..A.....	A.....	C..C.G...	A..A..T...	C..G...A.C...	413			
Lmonocyt16S.SEQ	...C.AC...	G..T.G...	G.....	G.....	C.....	A.....	C..C.G...	A..A..T...	C..G...A.C...	424			
Saureus16S.SEQ	...C.AC...	G..T.G...	G.....	G.....	C.....	A.....	C..C.G...	A..A..T...	C..G...A.C...	414			
Smutans16S.SEQ	...C.AC...	G..T.G...	G.....	G.....	C.....	A.....	C..C.G...	A..A..T...	C..G...A.C...	413			
Spneumon16S.SEQ	...C.AC...	G..T.G...	G.....	G.....	KC.....	A.....	C..C.G...	A..A..T...	C..G...A.C...	400			
Spvogenes16S.SEQ	...C.AC...	G..T.G...	G.....	G.....	C.....	A.....	C..C.G...	A..A..T...	C..G...A.C...	308			
Mavitum16S.SEQ	...C.C...	G..T.G...	G.....	G.....	T..C.....	N.....	C..C.G...	A..A..T...	C..G...A.C...	363			
Mcb16S.SEQ	...C.C...	G..T.G...	G.....	G.....	T..C.....	C.....	C..C.G...	A..A..T...	C..G...A.C...	404			
Ecoli o157 16S.SEQ	TAAGTGGTCTGAGAGATGACCAACACCTGGAACCTGACGACACGCTGCTGAGGAGGACGACGATGCGGAAATATTCACATATGGGCGCAGCTGATCCAGCCATCCCGGTG												406
Kpneumon16S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	397
Aactinol6S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	404
Hinfluenzae 16S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	406
Bronchiisepica 16S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	401
Bparaptusis16S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	373
Bpertussis 16S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	399
Bcepacia 16S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	402
Bmal16S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	375
Bpseudomallei 16S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	454
Ngonorrhoeae 16S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	407
Nmening 16S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	407
Paeruginosa 16S.SEQ	..A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	403
Vcholerae 16S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	404
Venterocolitica 16S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	406

FIG. 2A-4

Alignment Report of Gram +&- 16S align.MEG, using Clustal method with Weighted residue weight table.
 Tuesday, November 27, 2001 4:14 PM

	410	420	430	440	450	460	470	480	49	500	510	520
Baebillies16S.SEQ	AG..T..TT..	A.C..	CT..G.TGTA..	A..CAA..T.C..GTTGG..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..
Bantracis16.SEQ	AG..T..TT..	A.C..	CT..G.TGTA..	A..CAA..T.C..GTTGG..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..
Efaecalis16S.SEQ	AG..T..TT..	A.C..	CT..G.TGTA..	A..CAA..T.C..GTTGG..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..
Llaectis16S.SEQ	AG..T..TT..	A.C..	CT..G.TGTA..	A..CAA..T.C..GTTGG..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..
Lmonocytis16S.SEQ	AG..T..TT..	A.C..	CT..G.TGTA..	A..CAA..T.C..GTTGG..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..
Saureus16S.SEQ	AG..T..TT..	A.C..	CT..G.TGTA..	A..CAA..T.C..GTTGG..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..
Smutans16S.SEQ	AG..T..TT..	A.C..	CT..G.TGTA..	A..CAA..T.C..GTTGG..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..
Spneumon16S.SEQ	AG..T..TT..	A.C..	CT..G.TGTA..	A..CAA..T.C..GTTGG..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..
Spvogenes16S.SEQ	AG..T..TT..	A.C..	CT..G.TGTA..	A..CAA..T.C..GTTGG..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..	GGGG..TA..C..
Maviun16S.SEQ	GGG..T..C..	GGG..T..C..	GGG..T..C..	GGG..T..C..	GGG..T..C..	GGG..T..C..	GGG..T..C..	GGG..T..C..	GGG..T..C..	GGG..T..C..	GGG..T..C..	GGG..T..C..
Ecoli o157 16S.SEQ	TATGACAGAGCCTTCGGGTGTAAAGTAACTTACAGCGGGAGAA--GGAGTAAAGTAACTTACAGCGGTAAACCC--GGAGAGAGACAGCGGTAACTCCTGGTCCAGCA											
Kpneumonias 16S.SEQ	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....
Aactinolis16S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Hinfluenzae 16S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Bbronchiisepitica 16S.SEQ	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....
Bparapertussis16S.SEQ	GC..T.....	GC..T.....	GC..T.....	GC..T.....	GC..T.....	GC..T.....	GC..T.....	GC..T.....	GC..T.....	GC..T.....	GC..T.....	GC..T.....
Bspertussis 16S.SEQ	GC..T.....	GC..T.....	GC..T.....	GC..T.....	GC..T.....	GC..T.....	GC..T.....	GC..T.....	GC..T.....	GC..T.....	GC..T.....	GC..T.....
Bcepacia 16S.SEQ	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....
Bmalles 16S.SEQ	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....
Bpseudomallei 16S.SEQ	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....
Bngonorrhoeae 16S.SEQ	C.....	C.....	C.....	C.....	C.....	C.....	C.....	C.....	C.....	C.....	C.....	C.....
Bmening 16S.SEQ	C.....	C.....	C.....	C.....	C.....	C.....	C.....	C.....	C.....	C.....	C.....	C.....
Bpaeruginosa 16S.SEQ	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....
Bcholerae 16S.SEQ	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....
Benterocolitica 16S.SEQ	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....	G.....

FIG. 2A-5

Alignment Report of Gram +8- 16S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:14 PM

	530	540	550	560	570	580	590	600	610	620	630	640
Baebillia16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....
Banthracis16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....
Efaecalis 16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....
Lliactis 16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....
Imonocycl16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....
Saureus16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....
Smutans16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....
Spneumon16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....
Spvogenes16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....
Mavium16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....
Mb16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....
Ecoli 0157 16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....
Kpneumoniae 16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....
Aactinolis16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....
Hinfluenzae 16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....
Bbronchiseptica 16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....
Bparapertussis16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....
Bpertussis 16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....
Bcepacia 16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....
Bmallei 16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....
Bpseudomallei 16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....
Ngonorrhoeae 16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....
Nmening 16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....
Paeruginosa 16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....
Vcholerae 16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....
Yenterocolitica 16S.SEQ	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....	.....T..TG.....

FIG. 2A-6

Tuesday, November 27, 2001 4:14 PM

Alignment Report of Gram +8- 16S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:14 PM

	770	780	790	800	810	820	830	840	850	860	870	880
Baebilis16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....
Banthracis16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....
Zfaecalis16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....
Llactis16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....
Iaconocyc16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....
Saureus16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....
Smutans16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....
Spneumon16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....
Spvogenes16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....
Mavium16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....
Mtb16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....
Ec coli o157 16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....
Xpneumonise 16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....
Actinol16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....
Hinfluenzae 16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....
Bronchiseptica 16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....
Spapertussis16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....
Spertussis 16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....
Beopacia 16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....
Bmallei 16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....
Bpseudomallei 16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....
Ngonorrhoeae 16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....
Nmening 16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....
Paeruginosa 16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....
Vcholerae 16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....
Yenterocolitica 16S.SEQ	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....	.....G.....

FIG. 2A-8

Alignment Report of Gram +&- 16S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:14 PM

	890	900	910	920	930	940	950	960	970	980	990	1000
Esuttilis16S.SEQ	.....T.....	AC.G.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	T 1000
Panthracis16S.SEQ	.....A.....	C.G.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	T 1000
Efaecalis 16S.SEQ	.....A.....	.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	T 990
Llactis 16S.SEQ	.....A.....	.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	A.T 1007
Lmonocyt16S.SEQ	.....A.....	.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	T 1018
Saureus16S.SEQ	.....A.....	.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	T 1009
Smutans16S.SEQ	.....A.....	.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	T 1008
Spneumon16S.SEQ	.....A.....	.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	C 1008
Spvogenes16S.SEQ	.....A.....	.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	C 995
Maviu16S.SEQ	.....N.....	C.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	C 903
Mb16S.SEQ	.....C.....	.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	G.. 951
Ecoli o157 16S.SEQ	.....G.....	.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	G.. 992
Kpneumonise 16S.SEQ	.....G.....	.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	T 1000
Aactinol16S.SEQ	.....G.....	.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	T 992
Hinfluenzae 16S.SEQ	.....T.....	.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	T 998
Bronchiseptica 16S.SEQ	.....T.....	.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	T 994
Epapertussis16S.SEQ	.....T.....	.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	T 966
Spertussis 16S.SEQ	.....T.....	.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	T 992
Espacia 16S.SEQ	.....T.....	.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	T 995
Emallei 16S.SEQ	.....T.....	.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	T 968
Epsudomallei 16S.SEQ	.....T.....	.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	T 1047
Ngonorhose 16S.SEQ	.....T.....	.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	T 1001
Nmening 16S.SEQ	.....T.....	.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	T 1001
Paeruginosa 16S.SEQ	.....T.....	.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	T 995
Vcholerae 16S.SEQ	.....T.....	.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	T 998
Venterocolitica 16S.SEQ	.....T.....	.....	G.....	.....	.....	.....	.....	.....	.....	.....	.....	T 1000

FIG. 2A-9

0

Alignment Report of Gram +&- 16S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:14 PM

	1120	1130	1140	1150	1160	1170	1180	1190	1200	1210	1220	1230
Bautilis16S.SEQ	AT..A.....	A--TAA.TT..C..T..T..T..G..C..C..C..A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	1232
Banthracis16.SEQ	AT..A.....	TAA--TAA.TT..C..T..T..T..G..C..C..C..A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	1235
Faecalis 16S.SEQ	..TG..A.....	TAA--TAA.TT..C..T..T..T..G..C..C..C..A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	1235
Lactis 16S.SEQ	..TG..A.....	TAA--TAA.TT..C..T..T..T..G..C..C..C..A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	1242
Lmonocyl16S.SEQ	ATT..A.....	A--TAA.TT..C..T..T..T..G..C..C..C..A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	1250
Saureus16S.SEQ	AG..A.....	TAA--TAA.TT..C..T..T..T..G..C..C..C..A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	1246
Smutsens16S.SEQ	..TG..A.....	TAA--TAA.TT..C..T..T..T..G..C..C..C..A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	1243
Spneumon16S.SEQ	..TG..A.....	TAA--TAA.TT..C..T..T..T..G..C..C..C..A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	1230
Spyoenes16S.SEQ	..TG..A.....	TAA--TAA.TT..C..T..T..T..G..C..C..C..A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	1138
Mavium16S.SEQ	..TCA.....	G..AAT..G..GTGA.....G.G.TC..CTC.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	1186
Mtb16S.SEQ	..TCA.....	AC..AAT.GT..G..GTGA.....G.G.TC..CTC.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	1227
Ecoli o157 16S.SEQ	TCCTTAGTGCACGC-GTCCGCGCGGACCTCAAGGAGACTGCCAGTATTAACCTGAGGAGAGGTGGGAGTATGAGCTCAAGTCAATGCGCCCTTAGCCAGGCGTACACAGTCTCA	1236										
Kpneumoniae 16S.SEQ	.....G.....	ACTT..T.....G.....C.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	1228
Aactinol16S.SEQ	.....G.....	ACTT..T.....G.....C.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	1232
Hinfluenzae 16S.SEQ	.....G.....	ACTT..T.....G.....C.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	1234
Bbronchiseptica 16S.SEQ	..A.A.....	T.....AAA..C..T..T..T..G..C..C..C..A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	1226
Bparapertussis16S.SEQ	..A.A.....	T.....AAA..C..T..T..T..G..C..C..C..A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	1198
Bpertussis 16S.SEQ	..A.A.....	T.....AAA..C..T..T..T..G..C..C..C..A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	1224
Bcepacia 16S.SEQ	..A.A.....	T.....CAA.A.C..T.....G..C..C..C..A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	1227
Bmalley 16S.SEQ	..A.A.....	T.....CAA.A.C..T.....G..C..C..C..A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	1200
Bpseudomallei 16S.SEQ	..A.A.....	T.....CAA.A.C..T.....G..C..C..C..A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	1279
Ngonorrhoeae 16S.SEQ	..A.A.....	TAA--T..TT..C..T..T..T..G..C..C..C..A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	1236
Nmening 16S.SEQ	..A.A.....	TAA--TAA.TT..C..T..T..T..G..C..C..C..A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	1236
Paeruginosa 16S.SEQ	..A.A.....	AC-CT..GT..C..T.....G..C..C..C..A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	1231
Vcholerae 16S.SEQ	.....GT.....	AC..AAT.GT.....C.G.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	1235
Yenterocolitica 16S.SEQ	.....GT.....	AC..AAT.GT.....G.....C.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	A.....	1237

FIG. 2A-11

	1240	1250	1260	1270	1280	1290	1300	1310	1320	1330	1340	1350
.....ACMGA.....	G.C.....	AMC.....	GTT.....	CA.T.C.A.-C.....	TTGT.TC.T.....	C.C.....	G.G.....	CT.....	C.....	1351		
.....ACGG.....	CT.A.GAC.....	GTCG.TA.T.A.....	ACCGT.TC.T.....	T.G.....	C.A.....	CT.....	C.....	1354				
.....GAG.....	C.TC.T.GAC.....	GT.T.AA.T.T.....	CTTC.TC.T.....	C.G.....	C.G.....	C.....	C.....	1344				
.....ATGG.....	C.TC.....	GACA.T.TGTTT.TA.T.T.....	ACCAT.TC.T.....	T.G.....	C.A.....	C.....	C.....	1361				
.....ATAG.....	G.TC.....	AGC.....	GTCG.TA.T.C.A.-	ACTAT.TC.T.....	T.G.....	C.A.....	C.....	1369				
.....ACA.....	G.C.....	AMC.....	GT.....	AA.T.C.A.-	TGT.TC.T.....	A.....	CT.....	C.....	1365			
.....TCGG.....	C.TT.....	G.CG.T.CG.....	TA.T.T.-G.....	CCGA.TC.T.....	G.....	C.....	C.....	1362				
.....TGG.....	C.TC.....	A.G.CG.T.CG.....	TA.T.T.....	CCA.TC.T.....	T.G.....	C.A.....	C.....	1349				
.....TTGG.....	C.TC.....	A.G.CG.T.CG.....	TA.T.T.....	CCAA.TC.T.....	T.G.....	C.A.....	C.....	1257				
.....CGG.....	G.CT.....	TGC.TA.CTT.....	A.T.CTT.....	CGA.TC.T.....	C.....	C.....	G.....	CA 1306				
.....CGG.....	G.CT.....	TGC.....	GT.....	A.T.CTT.....	CGG.TC.T.....	C.....	G.....	CA 1346				
CAATGGCGATACAGAGACGACCTCGCGAGACAGCGACCTC-ATAAAGTGGCTCGTAGTCGGATTGAGTGCACACTGCACCTCAAGTGGCGAATCGTAGTAATCGTG 1355	AT.....	T.....	G.G.T.A.C.A.CA.....	TG.CG.T.A.T.-G.....	AT.....	TA.....	T.....	C.....	A 1347			
.....T.....	G.G.....	AGCT.....	GTCG.....	A.T.....	A.....	TA.....	T.....	C.....	1353			
.....TCGG.....	G.G.TC.C.A.C.....	G.CG.....	CA.T.C.-G.....	CCCGA.....	C.C.....	G.G.....	G.....	C.....	1345			
.....Bparapertussis16S.SEQ	G.G.TC.C.A.C.....	G.CG.....	CA.T.C.-G.....	CCCGA.....	C.C.....	G.G.....	G.....	C.....	1317			
.....Bpertussis16S.SEQ	G.G.TC.NC.A.C.....	G.CG.....	CA.T.C.-G.....	CCCGA.....	N.....	C.C.....	G.G.....	C.....	1343			
.....TCGGA.....	G.G.TT.C.A.C.....	G.CG.....	TA.T.C.-G.....	ACC.A.....	C.C.....	G.G.....	CT.....	C.....	1346			
.....TCGGA.....	G.G.TC.C.A.C.....	G.CG.....	CA.T.C.-G.....	ACCGA.....	C.C.....	G.G.....	CT.....	C.....	1319			
.....TCGGA.....	G.G.TC.C.A.C.....	G.CG.....	CA.T.C.-G.....	ACCGA.....	C.C.....	G.G.....	CT.....	C.....	1398			
.....TCGG.....	G.G.T.C.AGC.....	GCGG.....	CA.T.-C.....	ACCGA.....	C.C.....	G.G.....	G.....	CA 1355				
.....TCGG.....	G.G.T.C.AGC.....	GCGG.....	CA.T.-C.....	ACCGA.....	C.C.....	G.G.....	G.....	CA 1355				
.....TCGG.....	G.G.TT.C.AGC.....	T.CG.....	TA.T.C.-	ACCGA.....	C.C.....	G.G.....	G.....	1350				
.....T.....	G.G.C.....	TAC.....	GTCG.....	A.T.-C.....	A.....	T.....	CT.....	CA 1354				
.....AG.....	T.....	A.....	T.....	A.....	CT.....	A.....	CT.....	A 1356				

FIG. 2A-12

FIG. 2A-13

FIG. 2A-13

Alignment Report of Gram +&- 16S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:14 PM

	1480	1490	1500	1510	1520	1530	1540	
Bautilis16S.SEQ	.G..CAG....T.....	.....G.....	.....TC.....	.....GG.....	.....C.....	.....	.....TCT	1427
Banthracis16S.SEQ	AA..CCG.....	.....G.....	.....TC.....	.....GG.....	.....C.....	.....	.....T	1544
Efaecalis 16S.SEQ	.G..CAG..A.T.....	.....G.....	.....TC.....	.....GG.....	.....C.....	.....	.....TCT	1449
Llactis 16S.SEQ	.G..CAA.....T.....	.....G.....	.....TC.....	.....GG.....	.....C.....	.....	.....TCT	1548
Lmonocyt16S.SEQ	.G..GG.....T.....	.....G.....	.....TC.....	.....GG.....	.....C.....	.....	.....T	1524
Saureus16S.SEQ	.G..AG.....T.....	.....C.G.....	.....TT..G.....	.....GA.....	.....	.....	.....	1555
Smutans16S.SEQ	.G..CGGC..T...AC.....	.....G.....	.....CC.....	.....GG.....	.....C.....	.....	.....TCT	1551
Spneumon16S.SEQ	GTGATCATGACTGGGTGACGTACAGGT-ACCGTAGG	.....G.....	.....GGAC	.....GGAC	.....GGAC	.....	.....T	1335
Spyrogenes16S.SEQ	.....N.....	.....	.....	.....	.....	.....	.....	1465
Mavium16S.SEQ	.....N.....	.....	.....	.....	.....	.....	.....	1536
Mtd16S.SEQ	.....N.....	.....	.....	.....	.....	.....	.....	1542
Ecoli o157 16S.SEQ	.....N.....	.....	.....	.....	.....	.....	.....	1534
Kpneumon16S.SEQ	.....N.....	.....	.....	.....	.....	.....	.....	1485
Aactino16S.SEQ	.....N.....	.....	.....	.....	.....	.....	.....	1487
Hinfluenzae 16S.SEQ	.....N.....	.....	.....	.....	.....	.....	.....	1532
Ebronchiseptica 16S.SEQ	.....N.....	.....	.....	.....	.....	.....	.....	1485
Bparapertussis16S.SEQ	.....N.....	.....	.....	.....	.....	.....	.....	1464
Bpertussis 16S.SEQ	.....N.....	.....	.....	.....	.....	.....	.....	1535
Bcepacia 16S.SEQ	.....N.....	.....	.....	.....	.....	.....	.....	1488
Bmallei 16S.SEQ	.....N.....	.....	.....	.....	.....	.....	.....	1610
Bpseudomallei 16S.SEQ	.....N.....	.....	.....	.....	.....	.....	.....	1544
Ngonorrhoeae 16S.SEQ	.....N.....	.....	.....	.....	.....	.....	.....	1544
Nmening 16S.SEQ	.....N.....	.....	.....	.....	.....	.....	.....	1537
Paeruginosa 16S.SEQ	.....N.....	.....	.....	.....	.....	.....	.....	1467
Vcholerae 16S.SEQ	.....N.....	.....	.....	.....	.....	.....	.....	1485
Yenterocolitica 16S.SEQ	.....NN.N.	.....	.....	.....	.....	.....	.....

Decoration 'Decoration #1': Hide (as '.') residues that match Ecoli o157 16S.SEQ exactly.

FIG. 2A-14

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:14 PM

	10	20	30	40	50	60	70	80	90	100	110
Subtilis 23S.SEQ	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG
Bantracis 23S.SEQ	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG
Efacelis 23S.SEQ	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG
Llactis 23S.SEQ	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG
Lmonocytogenes 23S.SEQ	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG
Saureus 23S.SEQ	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG
Smutans 23S.SEQ	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG
Spneumoniae 23S.SEQ	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG
Spvogenes 23S.SEQ	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG
Mavium 23S.SEQ	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG
Mtuberculosis 23S.SEQ	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG
Ecoli 23S.SEQ	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG
Kpneumoniae 23S.SEQ	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG
Hinfluenzae 23S.SEQ	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG
Hbrochiseptica 23S.SEQ	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG
Bparapertussis 23S.SEQ	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG
Bpertussis 23S.SEQ	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG
Bcepacia 23S.SEQ	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG
Bmallei 23S.SEQ	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG
Bpseudomallei 23S.SEQ	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG
Ngonorthoeae 23S.SEQ	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG
Neminigitidis 23S.SEQ	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG
Paeruginosa 23S.SEQ	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG
Vcholeracae 23S.SEQ	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG
Venterocolitica 23S.SEQ	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG	TT.GA..G.CG

FIG. 2B-1

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.

Tuesday, November 27, 2001 4:14 PM

	120	130	14	150	160	17	180	190	200	210	220	
Baebilis 23S.SEQ	CCACTCGAATGATGG	CA..T	.....	T.....	ATA.G.GA..AG..C	.....	.....	.....	.....	G.....G	A 230
Banthracis 23S.SEQ	CCAACGAAATGTGG	C..T	.....	A.....	GTAA-GGA..A.G..CA	.....	.....	.....	.....	.....	A 230
Bfacaellis 23S.SEQ	A 230
Liactis 23S.SEQ	A 230
Laonocytogenes 23S.SEQ	A 230
Saureus 23S.SEQ	A 230
Smutans 23S.SEQ	A 230
Spneumoniae 23S.SEQ	A 230
Spvogenes 23S.SEQ	A 230
Maviu 23S.SEQ	A 230
Mtuberculosis 23S.SEQ	A 230
Ecoli 23S.SEQ	A 230
Kpneumoniae 23S.SEQ	A 230
Hinfluenzae 23S.SEQ	A 230
Bbrochiseptica 23S.SEQ	A 230
Bparapertussis 23S.SEQ	A 230
Bpertussis 23S.SEQ	A 230
Bcopacia 23S.SEQ	A 230
Bmallei 23S.SEQ	A 230
Bpseudomallei 23S.SEQ	A 230
Ngonorrhoeae 23S.SEQ	A 230
Neminigitidis 23S.SEQ	A 230
Paeruginosa 23S.SEQ	A 230
Vcholerae 23S.SEQ	A 230
Yenterocolitica 23S.SEQ	A 230

FIG. 2B-2

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:14 PM

	230	240	250	26	270	280
Saibutills 23S.SEQ	T.C.....TG.....	CGA.C-AC.GA-TCA	-----GCCCA-----	AAOCCA-----	AG.TTCCCT.T.TGGTTGAGGAC.	-----C.T.AC-----
Banthracis 23S.SEQ	T.C.....T.TG.....	---AC.AACATA-----	-----GCCCA-----	AAOCCA-----	AG.TTCCCT.T.TGGTTGAGGAC.	-----T.TA.AC-----
Efacelis 23S.SEQ	TTT.....TG.....	---AC.GA-AGA-----	-----GCCCA-----	AAOCCA-----	CA...TTCCCTTG.T.TGGTTGAGGAC.	-----TC.A.A.A-----
Lilactis 23S.SEQ	AAC.....T.GTA.....	---C.AA-GAA-----	-----GCCCA-----	AAOCCA-----	A...TTCCCT.T.TGGTTGAGGAC.	-----C-----
Amonocytogenes 23S.SEQ	ATC.....T.TG.....	---AC.AA-AGA-----	-----GCCCA-----	AAOCCA-----	A...TTCCCT.T.TGGTTGAGGAC.	-----C.TA.AC-----
Saureus 23S.SEQ	TTT.....TT.....	---AC.GA-AGA-----	-----GCCCA-----	AAOCCA-----	CA...TTCCCTTG.T.TGGTTGAGGAC.	-----C.TA.AC-----
Smutans 23S.SEQ	A.C.....G.T.....	---GA.CA-GGA-----	-----GCCCA-----	AAOCCA-----	GA.T.TTT.C.C.TT...TGGTTGAGGAC.	-----C-----
Pneumonias 23S.SEQ	A.C.....G.TT.....	---AC.GA-GAA-----	-----GCCCA-----	AAOCCA-----	A...TTT.CTCTCT.TGGTTGAGGAC.	-----C-----
Spoyogenes 23S.SEQ	---C.....G.TT.....	---AC.CA-GGA-----	-----GCCCA-----	AAOCCA-----	TTT.CTC.TC.TGGTTGAGGAC.	-----C-----
Maivium 23S.SEQ	T.T.....GT.....	---C.C.AACAGCTAAACCGATGACGACAC.	GGT...G.TTGT.T.TGC.TGGTTGAGGATGATATGTC.	CTCTACTGCTGCTG	356	
Ntuberculosis 23S.SEQ	T.T.....G.A.....	TTT.....OC.C.AACAGCTAAACCGATGATGATGTC.	GGT...G.TTGT.T.TGC.TGGTTGAGGAC.	GATATGTC...C.CTACCGGCTG	349	
Ecogoli 23S.SEQ	CGAGATCCCGGATGAGCGAGCGAA-GGGG	-----G-AGGAGCGACGACCTG-----	-----A-----	ATCAGTGT-----	286	
Kynemoniae 23S.SEQ	.....T.GT.....	.....A.C.....	AGT.AGTGA-----	-----T-----	-----G.A.A.A-----	290
Influenzae 23S.SEQ	.....GAA.....	.....T.....	---C-----	TTT-----	TT.T.CA-----	279
Bbrochiseptica 23S.SEQ	.....GAA.....	.....T.....	---C-----	TTT-----	TT.T.CA-----	278
Bparaptusis 23S.SEQ	.....GAA.....	.....T.....	---C-----	TTT-----	TT.T.CA-----	278
Bpertsusis 23S.SEQ	.....GAA.....	.....T.....	---C-----	TTT-----	TT.T.CA-----	278
Bcepacia 23S.SEQ	.....AA.....	.....T.....	---C-----	TTT-----	TT.T.CA-----	281
Bnallee 23S.SEQ	.....AA.....	.....T.....	---C-----	TTT-----	TT.T.CA-----	281
Bpsudomallei 23S.SEQ	.....AA.....	.....T.....	---C-----	TTT-----	TT.T.CA-----	281
Ngonorrhoeae 23S.SEQ	.....G.A.....	.....T.....	---C-----	TTT-----	TT.T.CA-----	284
Nemingitidis 23S.SEQ	.....G.A.....	.....T.....	---C-----	TTT-----	TT.T.CA-----	283
Paeruginosa 23S.SEQ	.....TT.....	.....T.....	---C-----	TTT-----	TT.T.CA-----	282
Vcholerae 23S.SEQ	.....GGT.....	.....T.....	---C-----	TTT-----	TT.T.CA-----	281
Yentorocollitica 23S.SEQ	.....GAA.....	.....T.....	---C-----	TTT-----	TT.T.CA-----	286

FIG. 2B-3

FIG. 2B-4

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
 Tuesday, November 27, 2001 4:14 PM

	380	390	400	410	420	430	440	450	460	470	480	490
Bsubtilis 23S.SEQ	A.....	AA.T.C..G..	CC..A.....	TC.....	CT.G..	T.....	C.....	A.....	544			
Banthracis 23S.SEQ	A.....	AA.T.C..G..	CC..A.....	TC.....	CT.G..	T.....	C.....	A.....	545			
Efaecalis 23S.SEQ	A.....	AA.T.C..G..	CC.C.....	CG.....	CT.G..	T.....	C.....	A.....	537			
Liactis 23S.SEQ	CA.A..A.T..	CC..A.....	TC.....	CT.G..	T.....	C.....	A.....	532			
Lmonocytogenes 23S.SEQ	A.....	AA.T.C..G..	CC..A.....	TC.....	CT.G..	T.....	C.....	A.....	544			
Saureus 23S.SEQ	.AG.....	AA.T.C..G..	C..A..C..A..	TC.T.....	TCT.G..	T.....	C.....	A.....	544			
Smutans 23S.SEQ	A..A..C..G..	C..A..C..A..	TC.....	CT.G..	T.....	C.....	A.....	529			
Spneumoniae 23S.SEQ	AA..C..G..	C..A..C..A..	TC.....	CT.G..	T.....	C.....	A.....	530			
Spvogenes 23S.SEQ	.A.....	CA.A..TC..	G..C..C..A..	TC.....	CT.G..	T.....	C.....	A.....	531			
Navium 23S.SEQ	.G.C.....	A..T.C.G..	C..C..C..A..	TC.....	CT.G..	T.....	C.....	A.....	593			
Mtuberculosis 23S.SEQ	.G.C.....	A..T.C.G..	C..C..C..A..	TC.....	CT.G..	T.....	C.....	A.....	587			
Ecoli 23S.SEQ	OGACACGTGGTATCTCTGATATAGGGGACCATCTCCAGGCTAATCTCTGACTGACGATATGACACGTACCTGAGGAGGAGGAGGAGT	499										
Kpneumoniae 23S.SEQ	.....	A.....	T..G.A.....	C.....	T.....	A.....	T.....	505			
Hinfluenzae 23S.SEQ	.....	AA.....	G.....	G.....	G..TC	.....	AA.....	492		
Bbrochiseptica 23S.SEQ	.....	AA.....	G.....	G.....	G..TC	.....	AA.....	492		
Bparapertussis 23S.SEQ	.....	AA.....	G.....	G.....	G..TC	.....	AA.....	492		
Bpertussis 23S.SEQ	.....	AA.....	G.....	G.....	G..TC	.....	AA.....	497		
Bcepacia 23S.SEQ	.....	AA.....	G.....	G.....	G..TC	.....	AA.....	497		
Bmallei 23S.SEQ	.....	AA.....	G.....	G.....	G..TC	.....	AA.....	497		
Bpseudomallei 23S.SEQ	.....	AA.....	G.....	G.....	G..TC	.....	AA.....	497		
Ngonorrhoeae 23S.SEQ	.....	AA.....	G.....	G.....	G..TC	.....	AA.....	500		
Neminigitidis 23S.SEQ	.G.....	AA.....	G.....	G.....	G..TC	.....	AA.....	499			
Peeruginosa 23S.SEQ	.AG.....	AA.CTT.....	C.....	A.....	A.C.TC	.....	A.....	490			
Vcholerae 23S.SEQ	.....	A.....	G.....	G.....	G..TC	.....	AA.....	487		
Yenterocolitica 23S.SEQ	.....	AC.....	G.....	G.....	G..TC	.....	AA.....	499		

FIG. 2B-5

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:14 PM

	500	510	520	530	540	550	560	570	580	590	600
Baebilis 23S.SEQ	...G...T...	...G...C...	...T...CA...	...C...G...	...A...C...	...TG...	...G...	...AAC.G...	...G...	...CGA..C-CGT...	646
Banthracis 23S.SEQ	...G...T...	...G...C...	...AT...CA...	...C...G...	...A...C...	...TG...	...G...	...AAC.G...	...G...	...CGA..C-CGT...	648
Bfacelis 23S.SEQ	...T...T...	...G...C...	...CA...CA...	...C...G...	...A...C...	...TG...	...G...	...AAC.G...	...G...	...CGA..C-CGT...	640
Llactis 23S.SEQ	...T...C...	...G...C...	...A...TC...	...C...G...	...A...C...	...TG...	...G...	...AAC.G...	...G...	...CGA..C-CGT...	635
Lmonocytogenes 23S.SEQ	...C...TT...	...G...C...	...T...TA...	...C...G...	...A...C...	...TG...	...G...	...AAC.G...	...G...	...CGA..C-CGT...	647
Saureus 23S.SEQ	...T...T...	...G...T...	...T...CA...	...C...G...	...A...C...	...TG...	...G...	...AAC.G...	...G...	...CGA..C-CGT...	647
Smutans 23S.SEQ	...G...T...	...G...T...	...A...TC...	...C...G...	...A...C...	...TG...	...G...	...AAC.G...	...G...	...CGA..C-CGT...	632
Spneumonias 23S.SEQ	...T...T...	...G...C...	...CA...TC...	...C...G...	...A...C...	...TG...	...G...	...AAC.G...	...G...	...CGA..C-CGT...	633
Spyogenes 23S.SEQ	...T...T...	...G...C...	...CA...TC...	...C...G...	...A...C...	...TG...	...G...	...AAC.G...	...G...	...CGA..C-CGT...	634
Mavium 23S.SEQ	...T...T...	...G...C...	...T...C...CA...	...C...G...	...A...C...	...TG...	...G...	...AAC.G...	...G...	...CGA..C-CGT...	698
Mtuberculosis 23S.SEQ	...G...T...	...G...C...	...T...C...CA...	...C...G...	...A...C...	...TG...	...G...	...AAC.G...	...G...	...CGA..C-CGT...	707
Eccli 23S.SEQ	GNAAAGAACCTGAAACCTGTACGACAGCTGGAGCTCTTT	...AC...GC...	...GAGGCC...	...A...CCTT...	...G...	...C...A...G...	...C...A...G...	...C...A...G...	...C...A...G...	...C...A...G...	604
Kpneumonias 23S.SEQ	...T...T...	...G...C...	...T...CA...	...C...G...	...A...C...	...TG...	...G...	...AAC.G...	...G...	...CGA..C-CGT...	602
Hinfluenzae 23S.SEQ	...T...T...	...G...C...	...T...CA...	...C...G...	...A...C...	...TG...	...G...	...AAC.G...	...G...	...CGA..C-CGT...	610
Bbrochiseptica 23S.SEQ	...T...T...	...G...C...	...T...CA...	...C...G...	...A...C...	...TG...	...G...	...AAC.G...	...G...	...CGA..C-CGT...	594
Bparapertussis 23S.SEQ	...T...T...	...G...C...	...T...CA...	...C...G...	...A...C...	...TG...	...G...	...AAC.G...	...G...	...CGA..C-CGT...	596
Bpertussis 23S.SEQ	...T...T...	...G...C...	...T...CA...	...C...G...	...A...C...	...TG...	...G...	...AAC.G...	...G...	...CGA..C-CGT...	596
Bcepacia 23S.SEQ	...T...T...	...G...C...	...T...CA...	...C...G...	...A...C...	...TG...	...G...	...AAC.G...	...G...	...CGA..C-CGT...	600
Bmallei 23S.SEQ	...T...T...	...G...C...	...T...CA...	...C...G...	...A...C...	...TG...	...G...	...AAC.G...	...G...	...CGA..C-CGT...	600
Bpseudomallei 23S.SEQ	...T...T...	...G...C...	...T...CA...	...C...G...	...A...C...	...TG...	...G...	...AAC.G...	...G...	...CGA..C-CGT...	600
Ngonorrhoeae 23S.SEQ	...C...T...	...G...C...	...T...CA...	...C...G...	...A...C...	...TG...	...G...	...AAC.G...	...G...	...CGA..C-CGT...	604
Neminigitidis 23S.SEQ	...C...T...	...G...C...	...T...CA...	...C...G...	...A...C...	...TG...	...G...	...AAC.G...	...G...	...CGA..C-CGT...	603
Paeruginosa 23S.SEQ	...T...T...	...G...C...	...T...CA...	...C...G...	...A...C...	...TG...	...G...	...AAC.G...	...G...	...CGA..C-CGT...	594
Vcholerae 23S.SEQ	...T...T...	...G...C...	...T...CA...	...C...G...	...A...C...	...TG...	...G...	...AAC.G...	...G...	...CGA..C-CGT...	591
Yenterocolitica 23S.SEQ	...C...T...	...G...C...	...T...CA...	...C...G...	...A...C...	...TG...	...G...	...AAC.G...	...G...	...CGA..C-CGT...	603

FIG. 2B-6

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:14 PM

	10	20	30	40	50	60	70	80	90
.....G.A..G.T.C.....C.C..G.....G.TA.....CAT.....G.....TC 742									
.....G.T..G..C.....C.C..G.....G.TA.....T.....A.....TC 743									
.....GT..G..AC.....C.C..G.....G.TA.....AAT.....AT.....TC 736									
.....GTT..G..AC.....T.....G.TA.....ACT.....T..AT..T.A.G.....A..731									
.....G.G..A.A.C.....T.C..G.....G.TA.....CAT.....A..AA.....C.....TC 743									
.....G.A.T.A.T.T.....T.C..G.....G.TA.....T.....T.ATT.TCG.....C.T..T 742									
.....GTT..G..AC.....T.....G.AA.....G.T.....A..A.C.TA.A.G.....A..C.C.....A. 728									
.....GTT..G..AC.....T.....G.TA.....CCT.....T..AT..T.ACG.....AT.....C.C.....A. 729									
.....GTT..G..AC.....T.....G.TA.....C.....T..AT..T.T.G.....AT.....C.C.....A. 730									
.....C..TCG.....T.....C.C..G.....G.TA.....CATCCC..TTTGGG-GTGT.....G.GT.T.C.G.....G.GA.....C.....C 806									
.....C..TCG..-T.....C.C..G.....G.TA.....ACCAACGCGCTAGCGCGTGTGAAT..G.GT.T.C.G.....G.GA.....C.....C 826									
GTAA-CGATAGG-CGCGCGGAGGAGAACCGAGTCTTAACCGCGGTAA-AGTTTCAGGATAGACCGAACCCTGATCTAGCATGG 697									
.....T.....C.....T.....AAT.....A.....703									
.....Hinfluenzae 23S.SEQ									
.....-A.G.TCA.A.N.G.-CG.TA.....C.....C.T..G.....A.A.....C.....C 687									
.....Bbrochiseptica 23S.SEQ									
.....-A.G.TCA.A.N.G.-CG.TA.....C.....C.T..G.....A.A.....C.....C 688									
.....Bparaptusis 23S.SEQ									
.....-A.G.TCA.A.N.G.-CG.TA.....C.....C.T..G.....A.A.....C.....C 688									
.....Bpertussis 23S.SEQ									
.....C.....T.....C.G.T..-G.....CG.TA.....C.....T..CG.....A.....T.....C 691									
.....Bcepacia 23S.SEQ									
.....C.....C.G.T.C..G.....CG.TA.....C.....T..CG.....A.....T.....C 693									
.....Bmaliei 23S.SEQ									
.....-C.G.T.C..G.....CG.TA.....C.....T..CG.....A.....T.....C 693									
.....Bpseudomallei 23S.SEQ									
.....-G.....G.T.....T.....T..G.....GA.....T.....T 697									
.....Bgonorrhoeae 23S.SEQ									
.....G.T.....T.....T..G.....GA.....T.....T 696									
.....Neminiigitidis 23S.SEQ									
.....-T.....T.G.T.C..G.....TA.....C.T.....G.C.....T.....A. 687									
.....Paeruginosa 23S.SEQ									
.....T.....T.C..G.....T.....C.C.....CT.T.A.....G.....684									
.....Vcholerae 23S.SEQ									
.....T.....T.....T.....AAT.....A.....696									
.....Yenterocolitica 23S.SEQ									

FIG. 2B-7

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:14 PM

	700	710	720	730	740	750	760	770	780	790	800	810
Bsubtilis 23S.SEQ	...G...	T.CA...	...G.A...	...C...	...C.GC.C...	...G.GC.G...	...G.GC.G...	...G.A...	...T...	...G...	...T...	862
Banthracis 23S.SEQ	...G...	T.CA...	...G.A...	...C...	...C.GC.C...	...G.GC.G...	...G.GC.G...	...G.A.C.A...	...T...	...G...	...T...	863
Efaecalis 23S.SEQ	...G...	...G...	...A.GC...	...C...	...C.GT.C...	...G.GC.G...	...G.GC.G...	...G.A.C.A...	...T...	...A.G...	...T...	856
Llactis 23S.SEQ	...G...	...GT...	...G.GC...	...C...	...AGGAC.C...	...G.GTTT...	...G.GTTT...	...A.A.C.A...	...T...	...A.G...	...T...	851
Imonocytogenes 23S.SEQ	...A...	...AA...	...T...	...T...	...C.GC.C...	...G.GC.G...	...G.GC.G...	...G.A.C.A...	...T...	...G...	...T...	863
Saureus 23S.SEQ	...T.CA...	...G.A...	...T...	...T...	...T.C...	...G.G...	...AC.A...	...G.A.C.A...	...T...	...G...	...T...	862
Smutans 23S.SEQ	...GC...	...A.GC...	...G.GC...	...AGGAC.C...	...G.GTTT...	...G.GTTT...	...G.A.C.A...	...T...	...A.G...	...T...	...T...	848
Spneumonise 23S.SEQ	...GC...	...G.GC...	...G.GC...	...AGGAC.C...	...G.GTTT...	...G.GTTT...	...G.A.C.A...	...T...	...A.G...	...T...	...T...	849
Spoyogenes 23S.SEQ	...GT...	...A.GC...	...G.GC...	...AGGAC.C...	...G.GTTT...	...G.GTTT...	...G.A.C.A...	...T...	...A.G...	...T...	...T...	850
Mavium 23S.SEQ	...G...	...G...	...G.CGG...	...C...	...C.T.G...	...G.C.G.G...	...G.C.G.G...	...T.C.C.T...	...T.C.C.T...	...T.C.C.T...	...T.C.C.T...	926
Mtuberculosis 23S.SEQ	...G...	...G...	...G.CGG...	...C...	...C.T.G...	...G.C.G.G...	...G.C.G.G...	...T.C.C.T...	...T.C.C.T...	...T.C.C.T...	...T.C.C.T...	946
Ecoli 23S.SEQ	CAGGTTGAGGTGGTACACTACTGAGGACCGACGACTAATGTTGAAATTTAGCGATGACTTGTGCTGGGGTGAAAGCCCAATCAACCGGGAGTAGCTGGTCTCCOC											817
Kpneumonise 23S.SEQ	...											815
Hinfluenzae 23S.SEQ	...											823
Bbrochiseptica 23S.SEQ	...CAG...	...GTC...	...GTC...	...C.G...	...C.G...	...C.G...	...C.G...	...A.A...	...T.A...	...T.A...	...T.A...	807
Bparapertussis 23S.SEQ	...CAG...	...GTC...	...GTC...	...C.G...	...C.G...	...C.G...	...C.G...	...A.A...	...T.A...	...T.A...	...T.A...	808
Bpertussis 23S.SEQ	...CAG...	...GTC...	...GTC...	...C.G...	...C.G...	...C.G...	...C.G...	...A.A...	...T.A...	...T.A...	...T.A...	811
Bcepacia 23S.SEQ	...A...	...GT...	...GT...	...T...	...C.C...	...C.C...	...C.C...	...A.A...	...T.A...	...T.A...	...T.A...	813
Bmallei 23S.SEQ	...A...	...GT...	...GT...	...T...	...C.C...	...C.C...	...C.C...	...A.A...	...T.A...	...T.A...	...T.A...	813
Bpseudomallei 23S.SEQ	...A...	...GT...	...GT...	...T...	...C.C...	...C.C...	...C.C...	...A.A...	...T.A...	...T.A...	...T.A...	817
Bngonorrhoeae 23S.SEQ	...GCC...	...GGT...	...GGT...	...C.GC...	...C.GC...	...C.GC...	...C.GC...	...G.A...	...T.A...	...T.A...	...T.A...	816
Bneminigitidis 23S.SEQ	...GCC...	...GGT...	...GGT...	...C.GC...	...C.GC...	...C.GC...	...C.GC...	...G.A...	...T.A...	...T.A...	...T.A...	816
Bpaeruginosa 23S.SEQ	...A...	...G...	...G...	...C.CC...	...C.CC...	...C.CC...	...C.CC...	...A.C.A...	...T...	...G.TC...	...T...	807
Bvcholeriae 23S.SEQ	...A...	...TC...	...TC...	...	...	...	...	...	...	...	...	804
Benterocolitica 23S.SEQ	...											816

FIG. 2B-8

Tuesday, November 27, 2001 4:14 PM

	820	830	840	850	860	870	880	890	900	910	920	930
.....TACG.....	.....GCTA.....	AA--GT-A-G.GTCTT..A.	.....A--T..ACTA.....	.....C.GTCA.....	GG.....	.....G.ATTC.GT.....	.....C.....	.....G..AAT..C.--A 976				
.....TACG.....	.....GCTA.....	TAA--GTAAAG.GTCTT..A.	.....A--T..ACTA.....	.....CTCAT..GA.....	.....G.ATTC.GT.....	.....C.....	.....G..AAT..C.--A 978					
.....TACG.....	.....GCTA.....	G--AATTGAG.GTCTT..A.	.....T..ACTA.....	.....C.C.T..GG.....	.....G.ATTC.GAT.....	.....C.....	.....G..ATTC.T.--A 971					
.....TACG.....	.....GCTA..G.	AAATGTAAGTGTAT..A.	.....T..GTGA.....	.....CG.TA.GA.....	.....T.TC.GAT.....	.....C.....	.....G..TAATPAC.--CA 966					
.....TACG.....	.....GCTA.....	A--GT..AAG.GTCAAT..A.	.....T..ACTA.....	.....C.CT.T..GG.....	.....G.ATTC.GAT.....	.....C.....	.....G..AATTC.C.--A 978					
.....TACG.....	.....GCTA.....	AA--GT-A.G..TATTT..A.	.....T..ACGA.....	.....C.CC.T..GG.....	.....G.ATTC.GA.....	.....C.....	.....G..AATTC.C.--A 976					
.....TACG.....	.....GCTA..G.	GTGCG--GAG.CTCTT..A.	.....T..ATGGA.....	.....C.CC..GA.....	.....T.TC.GAT.....	.....C.....	.....G..AAC..G.--A 963					
.....TACG.....	.....GCTA..G.	ACATTT.GAG..TCTTT..A.	.....T..GTGA.....	.....C.....GA.....	.....T.TC.GAT.....	.....C.....	.....G..AATTC.C.--A 965					
.....TACG.....	.....GCTA..G.	AT..TT--AGTCTCTT..A.	.....T..GTGA.....	.....C.....GA.....	.....T.TC.GAT.....	.....C.....	.....G..AAC..GA.--A 965					
.....TACG.....	.....GCTA..G.	G.T--C.TGG.....C.A.--A.	.....T..G--AT..CGAT.....	.....C.C--A.TAGG.....	.....TG..GTC.GC.....	.....C.....	.....G..TG.TG.AA--A 1041					
.....TACG.....	.....GCTA..G.	G.T--C.TGG.....C.G.--A.	.....T..G--AT..CGAT.....	.....C.C--A.TAGG.....	.....TG..GTC.GC.....	.....C.....	.....G..TG.TG.AA--A 1061					
.....TACG.....	.....GCTA..G.	G.T--C.TGG.....C.G.--A.	.....T..G--AT..CGAT.....	.....C.C--A.TAGG.....	.....TG..GTC.GC.....	.....C.....	.....G..TG.TG.AA--A 1061					
.....TACG.....	.....GCTA..G.	G.T--C.TGG.....C.G.--A.	.....T..G--AT..CGAT.....	.....C.C--A.TAGG.....	.....TG..GTC.GC.....	.....C.....	.....G..TG.TG.AA--A 1061					
.....TACG.....	.....GCTA..G.	G.T--C.TGG.....C.G.--A.	.....T..G--AT..CGAT.....	.....C.C--A.TAGG.....	.....TG..GTC.GC.....	.....C.....	.....G..TG.TG.AA--A 1061					
.....TACG.....	.....GCTA..G.	G.T--C.TGG.....C.G.--A.	.....T..G--AT..CGAT.....	.....C.C--A.TAGG.....	.....TG..GTC.GC.....	.....C.....	.....G..TG.TG.AA--A 1061					
.....TACG.....	.....GCTA..G.	G.T--C.TGG.....C.G.--A.	.....T..G--AT..CGAT.....	.....C.C--A.TAGG.....	.....TG..GTC.GC.....	.....C.....	.....G..TG.TG.AA--A 1061					
.....TACG.....	.....GCTA..G.	G.T--C.TGG.....C.G.--A.	.....T..G--AT..CGAT.....	.....C.C--A.TAGG.....	.....TG..GTC.GC.....	.....C.....	.....G..TG.TG.AA--A 1061					
.....TACG.....	.....GCTA..G.	G.T--C.TGG.....C.G.--A.	.....T..G--AT..CGAT.....	.....C.C--A.TAGG.....	.....TG..GTC.GC.....	.....C.....	.....G..TG.TG.AA--A 1061					
.....TACG.....	.....GCTA..G.	G.T--C.TGG.....C.G.--A.	.....T..G--AT..CGAT.....	.....C.C--A.TAGG.....	.....TG..GTC.GC.....	.....C.....	.....G..TG.TG.AA--A 1061					
.....TACG.....	.....GCTA..G.	G.T--C.TGG.....C.G.--A.	.....T..G--AT..CGAT.....	.....C.C--A.TAGG.....	.....TG..GTC.GC.....	.....C.....	.....G..TG.TG.AA--A 1061					
.....TACG.....	.....GCTA..G.	G.T--C.TGG.....C.G.--A.	.....T..G--AT..CGAT.....	.....C.C--A.TAGG.....	.....TG..GTC.GC.....	.....C.....	.....G..TG.TG.AA--A 1061					
.....TACG.....	.....GCTA..G.	G.T--C.TGG.....C.G.--A.	.....T..G--AT..CGAT.....	.....C.C--A.TAGG.....	.....TG..GTC.GC.....	.....C.....	.....G..TG.TG.AA--A 1061					
.....TACG.....	.....GCTA..G.	G.T--C.TGG.....C.G.--A.	.....T..G--AT..CGAT.....	.....C.C--A.TAGG.....	.....TG..GTC.GC.....	.....C.....	.....G..TG.TG.AA--A 1061					
.....TACG.....	.....GCTA..G.	G.T--C.TGG.....C.G.--A.	.....T..G--AT..CGAT.....	.....C.C--A.TAGG.....	.....TG..GTC.GC.....	.....C.....	.....G..TG.TG.AA--A 1061					
.....TACG.....	.....GCTA..G.	G.T--C.TGG.....C.G.--A.	.....T..G--AT..CGAT.....	.....C.C--A.TAGG.....	.....TG..GTC.GC.....	.....C.....	.....G..TG.TG.AA--A 1061					
.....TACG.....	.....GCTA..G.	G.T--C.TGG.....C.G.--A.	.....T..G--AT..CGAT.....	.....C.C--A.TAGG.....	.....TG..GTC.GC.....	.....C.....	.....G..TG.TG.AA--A 1061					
.....TACG.....	.....GCTA..G.	G.T--C.TGG.....C.G.--A.	.....T..G--AT..CGAT.....	.....C.C--A.TAGG.....	.....TG..GTC.GC.....	.....C.....	.....G..TG.TG.AA--A 1061					
.....TACG.....	.....GCTA..G.	G.T--C.TGG.....C.G.--A.	.....T..G--AT..CGAT.....	.....C.C--A.TAGG.....	.....TG..GTC.GC.....	.....C.....	.....G..TG.TG.AA--A 1061					
.....TACG.....	.....GCTA..G.	G.T--C.TGG.....C.G.--A.	.....T..G--AT..CGAT.....	.....C.C--A.TAGG.....	.....TG..GTC.GC.....	.....C.....	.....G..TG.TG.AA--A 1061					
.....TACG.....	.....GCTA..G.	G.T--C.TGG.....C.G.--A.	.....T..G--AT..CGAT.....	.....C.C--A.TAGG.....	.....TG..GTC.GC.....	.....C.....	.....G..TG.TG.AA--A 1061					
.....TACG.....	.....GCTA..G.	G.T--C.TGG.....C.G.--A.	.....T..G--AT..CGAT.....	.....C.C--A.TAGG.....	.....TG..GTC.GC.....	.....C						

FIG. 2B-9

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:14 PM

	940	950	960	970	980	990	1000	1010	1020	1030	1040	1050
Baebtilis 23S.SEQ	TC.TT	T.G.T.T.-A.A.A.	GA..A-	CG.A..	G..	ATAC..	A..G..	AGTT..TT	..	..	..	1094
Banthracis 23S.SEQ	TC.TTA	T.G.T.T.-A.A.A.	GA..A-	CG.A..	G..	GTGA..	A..G..	AGTT..TT	..	..	..	1096
Efacaalis 23S.SEQ	TATC	T.G.T.T.-A.A.A.	GA..A-	CG.A..	G..	ATAT..	A..G..	GTT..A..	1089	..	..	1089
Llactis 23S.SEQ	TGTT	C.T.G.T.T.-A.A.	GA..A-	CG.A..	G..	AA..	A..G..	GTT..A..	1084	..	..	1084
Lmonocytogenes 23S.SEQ	T.G.T.T.-A.A.A.	GA..A-	CG.A..	G..	T..	C.A.ATAT..	A..G..	GTT..TT..	1096	..	..	1096
Ssaureus 23S.SEQ	A.TT	T.G.ACAT-	A..G..	G-T.CG.A	G..	A..	A..G..	CGTT..	1094	..	..	1094
Smutans 23S.SEQ	GAC	C.T.G.T.T.-A.A.	GA..A-	CG.A..	G..	A..	C.A.A.T..	GTT..A..	1081	..	..	1081
Spneumonise 23S.SEQ	TGTT	C.T.G.T.T.-A.A.	GA..A-	CG.A..	G..	A..	A.A.T..	GTT..A..	1083	..	..	1083
Spvogenes 23S.SEQ	TAT	C.T.G.T.T.-A.A.	GA..A-	CG.A..	G..	A..	A.A.CT..	GTT..A..	1083	..	..	1083
Maviun 23S.SEQ	G.GT	C.T.G.G..-A.A.	GC..AC	CG.A..	G..	T..G..	C..T..CGTT.C..	..	1160	..	..	1160
Mtuberculosis 23S.SEQ	-G.GT	C.T.G.G..-A.A.	GC..AC	CG.A..	G..	T..G..	C..C..CGTT.C..	..	1179	..	..	1179
Ecoli 23S.SEQ	ATCACGGAGACATACGGC	-GGGTCTACGTCCGTC	-GTGAGAGGAGAACACACCGCCAGCTAAGGTCCCAAGTTCATGTTAAGTGGAAACGATGTGGGAGGCCGACACA	1050	..	..	..	..	..	..	..	1050
Kpneumonise 23S.SEQ	..	..	..	..	..	..	..	..	..	..	..	1048
Hinfluenzae 23S.SEQ	CT.A	..	..	..	..	..	..	..	..	..	..	1055
Bbrochiseptica 23S.SEQ	G.TT	..	..	..	..	..	..	..	..	..	..	1038
Bparapertussis 23S.SEQ	G.TT	..	..	..	..	..	..	..	..	..	..	1039
Bpertussis 23S.SEQ	G.TT	..	..	..	..	..	..	..	..	..	..	1039
Bcepacia 23S.SEQ	..	..	..	..	..	..	..	..	..	..	..	1043
Bmallei 23S.SEQ	..	..	..	..	..	..	..	..	..	..	..	1043
Bpseudomallei 23S.SEQ	..	..	..	..	..	..	..	..	..	..	..	1045
Ngonorrhoeae 23S.SEQ	TC.T	..	..	..	..	..	..	..	..	..	..	1045
Neminigitidis 23S.SEQ	TC.T	..	..	..	..	..	..	..	..	..	..	1051
Paeruginosa 23S.SEQ	G.T	..	..	..	..	..	..	..	..	..	..	1050
Vcholerax 23S.SEQ	--TC	..	..	..	..	..	..	..	..	..	..	1040
Yenterocolitica 23S.SEQ	..	..	..	..	..	..	..	..	..	..	..	1035
	..	..	..	..	..	..	..	..	..	..	..	1049

FIG. 2B-10

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
 Tuesday, November 27, 2001 4:14 PM

	1060	1070	080	1090	1100	1110	1120	1130	1140	1150	1160
Beubtills 23S.SEQ	A.....	C.....	GT.....	C.....	C.....	C.....	C.....	C.....	C.....	C.....	ACTG 1211
Banthracis 23S.SEQ	A.T.....	C.....	GT.....	C.....	C.....	C.....	C.....	C.....	C.....	C.....	ACTG 1213
Efaacelis 23S.SEQ	A.T.....	C.....	GT.....	C.....	C.....	C.....	C.....	C.....	C.....	C.....	ACTA 1206
Llactis 23S.SEQ	A.T.....	C.....	GT.....	C.....	C.....	C.....	C.....	C.....	C.....	C.....	ACTG 1201
Lmonocytogenes 23S.SEQ	A.....	C.....	GT.....	C.....	C.....	C.....	C.....	C.....	C.....	C.....	ACTA 1213
Saureus 23S.SEQ	A.T.....	C.....	GT.....	C.....	C.....	C.....	C.....	C.....	C.....	C.....	ACTG 1211
Smutans 23S.SEQ	A.T.....	C.....	GT.....	C.....	C.....	C.....	C.....	C.....	C.....	C.....	ACTG 1200
Spneumonise 23S.SEQ	A.T.....	C.....	GT.....	C.....	C.....	C.....	C.....	C.....	C.....	C.....	ACTA 1202
Spyogenes 23S.SEQ	A.T.....	C.....	GT.....	C.....	C.....	C.....	C.....	C.....	C.....	C.....	ACTA 1202
Mavium 23S.SEQ	A.....	C.....	GT.....	C.....	C.....	C.....	C.....	C.....	C.....	C.....	CACAT 1279
Mtuberculosis 23S.SEQ	A.....	C.....	GT.....	C.....	C.....	C.....	C.....	C.....	C.....	C.....	CACAT 1298
Ecoli 23S.SEQ	GCACGATGTTGGCTTAGAAGCAGCCAT-CATTAAAGAAAGCGTTAATAGCTCACTGTCGAGTCGCGCTGACGAGATGTACGCGCTTAACCAT-GCACCGAAGCTGCGG-CAGC 1167										
Kpnaumonise 23S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..... 1165
Hinfluenzae 23S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..... T. 1173
Bbrochiseptica 23S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..... GT.T 1153
Bparapertussis 23S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..... GT.T 1154
Bpertussis 23S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..... GT.T 1154
Bcepacia 23S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..... AT. 1160
Bmallei 23S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..... AT. 1162
Bpseudomallei 23S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..... AT. 1162
Ngonorrhoeae 23S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..... AT. 1169
Neminigititidis 23S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..... AT. 1168
Paeruginosa 23S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..... T 1156
Vcholerac 23S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..... AT 1152
Yenterocolitica 23S.SEQ	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	..... 1166

FIG. 2B-11

[illegible]

FIG. 2B-12

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:14 PM

[illegible]

FIG. 2B-13

FIG. 2B-14

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:14 PM

	1490	1500	1510	1520	1530	
Bsubtilis 23S.SEQ	T.GGAAT	.....TTTC	CC.A..G.C..CT.	.....G...G.A..TATA	.....	1585
Banthracis 23S.SEQ	T.A.AAGT	.....CTTA	TTG.G....CT.	.....GG..AGTCC-TTAT	.....	G 1592
Efaclalis 23S.SEQ	TTGAG.AG..TT	..G.T-TT.C	TTCT.T....ACA.TT.	..C.GG..CG.AAT-AATA	.....	1584
Llactis 23S.SEQ	TTAGAGT.T..	..G.A-TTTC	TTCT.T....CAT..CT.	..GG.A..AC-TAC	.....	1568
Imonocytogenes 23S.SEQ	T.AG.AAT	.....CTTC	TC.CG....CA..CT.	..GG.A.G.A..TTAA	.....	1591
Saureus 23S.SEQ	..G.T-T.GT	TTCTG.T....CT.	..GG..AAGAC-TTGT	.....	.....	1586
Spneumoniae 23S.SEQ	..G.T-T.T	TTCTAT....CAT..CT.	..GG..CG.AG-TTTA	.....	.....	1565
Spysogenes 23S.SEQ	..G.T-T.TC	TTTAT....CAT..CT.	..GG..CG.A..TTTA	.....	.....	1571
Mavium 23S.SEQ	ATGGGGTG.C..GG.	GG.A.CGTACAGTC.GTGGT.TA..G..AA.CCGTAG-AGAGC	..TAG.CA.A.C.GTC.CTCACTAATCTGAGAGGTGATCATACCGGTT.A	1754		
Mtuberculosis 23S.SEQ	AGGGGGTG.C..GG.	GGTA.CGTACAGTC.GTGGT.CA..G..AA.CCGTAGAGAGC	..TAG.CA.A.C.GTC.CTCACTAATCTGAGAGGTGATCATACCGGTT.A	1776		
Ecoli 23S.SEQ	GGTTTCCAGCA--AATCCGAAA	---ATC---AAGGCTGAGGGTG---	ATGACGAGGACTAC---	G---	GT 1538	
Xpnaumoniae 23S.SEQ	..G.....T	.....T	.....T	.....	.....	1536
Hinfluenzae 23S.SEQ	..ANG.TT	.....C-T---TCC.T---CA.A..AGA	.....T	.....	.....	A 1545
Bbrochiseptica 23S.SEQ	..GGGCTT	.....GGCC	GA---G.AT.ANG.T	.....GC	.....CG.GC.AGTC	1522
Bparapertussis 23S.SEQ	..GGGCTT	.....GGCC	GA---G.AT.ANG.T	.....GC	.....CG.GC.AGTC	1523
Bpertussis 23S.SEQ	..GGGCTT	.....GGCC	GA---G.AT.ANG.T	.....GC	.....CG.GC.AGTC	1523
Bcepcia 23S.SEQ	..GGGCTT	.....GGCC	GA---G.AT.ANG.T	.....GC	.....CG.GC.AGTC	1526
Bmallei 23S.SEQ	..GGGCTT	.....GGCC	GA---G.AT.ANG.T	.....GC	.....CG.GC.AGTC	1529
Bpsudomallei 23S.SEQ	..GGGCTT	.....GGCC	GA---G.AT.ANG.T	.....GC	.....CG.GC.AGTC	1529
Ngonorrhoeae 23S.SEQ	..GGGCTT	.....GGCC	GA---G.AT.ANG.T	.....GC	.....CG.GC.AGTC	1529
Neminigitidis 23S.SEQ	..GGGCTT	.....GGCC	GA---G.AT.ANG.T	.....GC	.....CG.GC.AGTC	1539
Paeruginosa 23S.SEQ	..GGGCTT	.....GGCC	GA---G.AT.ANG.T	.....GC	.....CG.GC.AGTC	1538
Vcholerac 23S.SEQ	..GGGCTT	.....GGCC	GA---G.AT.ANG.T	.....GC	.....CG.GC.AGTC	1523
Venterocolitica 23S.SEQ	..GGGCTT	.....GGCC	GA---G.AT.ANG.T	.....GC	.....CG.GC.AGTC	1541

FIG. 2B-15

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:14 PM

	1540	1550	1560	1570	1580	1590	1600	1610	1620	1630	1640	1650
Baebillus 23S.SEQ	AGC...TTC.TG..T.ACA.G..A..	...	...	...	...	...	...	...	...	...	...	...
Banthracis 23S.SEQ	AGC...TCTTTG..T..C..G..A..	...	...	...	...	...	...	...	...	...	...	...
Efaealis 23S.SEQ	AGC...TTC.TG..T.ACA.G..A..	...	...	...	...	...	...	...	...	...	...	...
Lilactis 23S.SEQ	TGC...CTCT.TG..T.ACA.G..A..	...	...	...	...	...	...	...	...	...	...	...
Lmonocytogenes 23S.SEQ	TTC.TG..TTC.TG..TTC.TG..	...	...	...	...	...	...	...	...	...	...	...
Saureus 23S.SEQ	CT.CG..TCTTTG..TTC.TG..TTC.TG..	...	...	...	...	...	...	...	...	...	...	...
Smutans 23S.SEQ	AGC...TCTTTG..TTC.TG..TTC.TG..	...	...	...	...	...	...	...	...	...	...	...
Spneumonias 23S.SEQ	AGC...TTC.TG..TTC.TG..TTC.TG..	...	...	...	...	...	...	...	...	...	...	...
Spynogenes 23S.SEQ	AGC...TTC.TG..TTC.TG..TTC.TG..	...	...	...	...	...	...	...	...	...	...	...
Mavium 23S.SEQ	.CC...TTC.TG..TTC.TG..TTC.TG..	...	...	...	...	...	...	...	...	...	...	...
Mtuberculosis 23S.SEQ	.CC...TTC.TG..TTC.TG..TTC.TG..	...	...	...	...	...	...	...	...	...	...	...
Eccli 23S.SEQ	GC.TGAGCAGCAATGCGCTCTTCGAGGAAAGCCTTAAGCATCAGGTACATCAATCTGACCCCAACGACAGGTGT-CAGGTAGAGANTACAGGCGCTTGAGAGATC	...	...	...	...	...	...	...	...	...	...	...
Kpneumonias 23S.SEQ	.....T.....T.....	...	...	...	...	...	...	...	...	...	...	...
Hinfluenzae 23S.SEQ	.....T...TG..A..ACA.....	...	...	...	...	...	...	...	...	...	...	...
Bbrochiseptica 23S.SEQ	.....TG.TTGAA--G..G..A.....	...	...	...	...	...	...	...	...	...	...	...
Bparapertussis 23S.SEQ	.....TG.TTGAA--G..G..A.....	...	...	...	...	...	...	...	...	...	...	...
Bpertussis 23S.SEQ	.....TG.TTGAA--G..G..A.....	...	...	...	...	...	...	...	...	...	...	...
Bcepacia 23S.SEQ	.....TG.TTGAA--G..G..A.....	...	...	...	...	...	...	...	...	...	...	...
Bmaellei 23S.SEQ	.....TG.TTGAA--G..G..A.....	...	...	...	...	...	...	...	...	...	...	...
Bpseudomallei 23S.SEQ	.....TG.TTGAA--G..G..A.....	...	...	...	...	...	...	...	...	...	...	...
Bngonorrhoeae 23S.SEQ	.....TG.TTGAA--G..G..A.....	...	...	...	...	...	...	...	...	...	...	...
Bneminigitidis 23S.SEQ	.....TG.TTGAA--G..G..A.....	...	...	...	...	...	...	...	...	...	...	...
Bpaeruginosa 23S.SEQ	.....TG.TTGAA--G..G..A.....	...	...	...	...	...	...	...	...	...	...	...
Bcholerae 23S.SEQ	.....TG.TTGAA--G..G..A.....	...	...	...	...	...	...	...	...	...	...	...
Benterocolitica 23S.SEQ	.....TG.TTGAA--G..G..A.....	...	...	...	...	...	...	...	...	...	...	...

FIG. 2B-16

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:14 PM

[illegible]

FIG. 2B-17

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:14 PM

	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2010
Baebtilla 23S.SEQ	.A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Banthracis 23S.SEQ	.A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Efacaellis 23S.SEQ	.A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Liactis 23S.SEQ	.A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Imonocytogenes 23S.SEQ	.A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Saureus 23S.SEQ	.A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Smutans 23S.SEQ	.A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Spneumonae 23S.SEQ	.A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Spvogenes 23S.SEQ	.A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mavium 23S.SEQ	.A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mtuberculosis 23S.SEQ	.A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ecoli 23S.SEQ	.A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kpneumonae 23S.SEQ	.A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hinfluenzae 23S.SEQ	.A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bbrochiseptica 23S.SEQ	.A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bparapertussis 23S.SEQ	.A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bpertussis 23S.SEQ	.A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bcepacia 23S.SEQ	.A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bmallei 23S.SEQ	.A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bpseudomallei 23S.SEQ	.A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ngonorrhoeae 23S.SEQ	.A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Neminigitidis 23S.SEQ	.A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Paeruginosa 23S.SEQ	.A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vcholerae 23S.SEQ	.A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yenterocolitica 23S.SEQ	.A.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

FIG. 2B-19

Tuesday, November 27, 2001 4:14 PM

Alignment Report of Gram +8- 23S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:14 PM

	2140	2150	2160	2170	2180	2190	2200	2210	2220	2230	2240	2250
Bsubtilis 23S.SEQ	ACC.-AG	CT.-GGT	G.AT.GG	GG	T	GGCTGTA	CC	CCCGG	C.T	G	CGG.GA	2278
Banthracis 23S.SEQ	ACC.-AG	T.CT.-GGT	G.CTGG	GG	G	GACTGTA	AA	CCAGGTC	T	GACCGG	GA	2274
Efaecalis 23S.SEQ	GACC.-A	T.T.-GGA	G.CTGG	GG	T	GTG.TA	GA	CC	CC	AC.A	GT	2264
Llactis 23S.SEQ	ATA	T.T.-TATT	G.TTG	GG	T	G.C.TA	G.T	AC	CC	CTGG	A.A	2254
Imonocytogenes 23S.SEQ	ACGT.-AG	T.CT.-ACGA	G.A.TGG	GG	T	GGCTGTA	GACCA	CC	CCA	GC.T	G	2284
Saureus 23S.SEQ	ACGT.-AG	T.CT.-ACGT	G.CTGG	GG	T	AGCTGTG	GCT	CC	C	AC.T	GT	2278
Smutans 23S.SEQ	AGT.-A	T.-AC.T	G.TTG	GG	T	GTG.A	G.C	AC	CC	TAGGT	ATCTAC	2251
Spneumoniae 23S.SEQ	GATC.-	T.-GAA	A.CTGG	GG	T	GTG.TA	G.CC	AC	CCA	TAG	CTA	2253
Spvogenes 23S.SEQ	CTTC.-	T.-GAA	G.TTG	GG	T	GTG.TA	G.C	AC	CCA	TAG	CTA	2254
Mavium 23S.SEQ	CA-CA	T.TG-T	T.TTG	GG	T	GATGTA	GACAC	C	A	C.T	G.T	2466
Mtuberculosis 23S.SEQ	ACC.-C	TG.GG-C	T.TTG	GG	T	GATGTA	GACA	C	C	A	G.T	2489
Ecoli 23S.SEQ	AG-TGTGGACCCGCTGCTGAT	-GGAGCCGACCTTGAAATACCACTTAACTGATGTTACCTGGACCGGTGA	-TCGGGTGGGACAGTGTCTGGGTAGTTGACTGG	2250								
Kpneumoniae 23S.SEQ	-C	G	A									2250
Hinfluenzae 23S.SEQ	-CMGT	ATG	G									2256
Bbrochiseptica 23S.SEQ	CTC.-A	T	AT	-GAG	AT							2219
Bparapertussis 23S.SEQ	CTC.-A	T	AT	-GAG	AT							2220
Bpertussis 23S.SEQ	CTC.-A	T	AT	-GAG	AT							2220
Bcepacia 23S.SEQ	ACC.-A	T	T	-GGT	T							2225
Bmallei 23S.SEQ	ACC.-A	T	T	-GGT	T							2228
Bpseudomallei 23S.SEQ	ACC.-A	T	T	-GGT	T							2228
Ngonorhoeae 23S.SEQ	CA.-A	T	T	-GGT	T							2239
Neminigitidis 23S.SEQ	CA.-A	T	T	-GGT	T							2238
Faeruginosa 23S.SEQ	-C	TC	G	-T	AT							2238
Vcholerae 23S.SEQ	AC	-T	G	T	GT							2233
Yenterocolitica 23S.SEQ	-											2253

FIG. 2B-21

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.

	2260	2270	2280	2290	2300	2310	2320	2330	2340	2350	2360	2370
.....	G.....	AG.....	C..C.A.....	CC..C.GAA.....	T..A.....	TTC.CAG.....	T..A.....	C..C..G.....	.....	ACCT..AAGT.....	.....	2398
.....	G.....	T.....	C..C.A.....	CC..C.GAA.....	T..A.....	TTC.TAG.....	A.....	GS.....	.....	ACCT..AAGT.....	.....	2394
.....	G.....	AG.....	C..C.A.....	CC..C.GAA.....	T..A.....	TTC.AAG.....	T..A.....	G..G..G.....	.....	ACCT..AAGT.....	.....	2384
.....	G..-	Lactis 238.SEQ	C..T.A.....	C.GAT.....	T..A.....	ATC.TAG.....	T..A..T.A.....	.....	.....	A.CT..AA.T.....	.....	2373
.....	G.....	Amnocytoenes 238.SEQ	C..C.A.....	CC..C.GAA.....	AT..A.....	TTC.CAG.....	T..A.....	C..C..G.....	.....	AC.....AAGT.....	.....	2400
.....	G.....	AG.....	C..T.A.....	CC..C.GAA.....	T..A.....	TTCATAG.....	T..A.....	GS.....	.....	ACCT..AAGT.....	.....	2398
.....	G.....	C.....	C..C.A.....	CC..C.GA.....	T..A.....	TC.TAG.....	T..A..T.....	GS.....	.....	ACA.....AAGT.....	.....	2371
.....	G.....	AG.....	C..C.A.....	CC..C.GAA.....	T..A.....	TTC.CAG.....	T..A..T.....	GS.....	.....	A.CT..AA.T.....	.....	2373
.....	G.....	C.....	C..C.A.....	CC..C.GAT.....	T..A.....	ATC.CAG.....	T..A..T.....	GS.....	.....	A.CT..AA.T.....	.....	2374
.....	TG.....	.....	C..C.A.....	CC..C.A.....	CA.....	T..CG.....	T..GT.....	C..G.....	.....	AC.T..AAGT..A.....	.....	2586
.....	TG.....	AT.....	C..C.A.....	CC..C.A.....	A.....	CA.....	T..CG.....	T..AT.....	C..G.....	AC.T..AAGT..A.....	.....	2609
.....	GCGGTCTCTCTAAGTACGGACACAGAAAGTTGGCTAATCTGTGGACATCAGAGAGTTGCTGATATGCGATATAGCCGAGTTGACTCCGAGGTGACGCGCGGAGG 2370	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2370
.....	C.....	C.....	C.....	A.....	.....	.....	.....	T.....	.....	.....	.....	2370
.....	C.....	C.....	C.....	T.....	AC.....	GT.....	T.....	A.....	.....	ACA.....AAGT.....	.....	2376
.....	C.....	C.....	TT.....	AC.....	GGTAC.....	A.....	GT.CT.A.....	GT.....	T.....	AC.....A..T.....A.....	.....	2337
.....	C.....	C.....	TT.....	AC.....	GGTAC.....	A.....	GT.CT.A.....	GT.....	T.....	AC.....A..T.....A.....	.....	2339
.....	C.....	C.....	TT.....	AC.....	GGTAC.....	A.....	GT.CT.A.....	GT.....	T.....	AC.....A..T.....A.....	.....	2339
.....	C.....	C.....	T.....	AC.....	GGTAC.....	A.....	GT.CT.A.....	GT.....	A.....	ACC.....AAGT.....	.....	2345
.....	C.....	C.....	T.....	AC.....	GGTAC.....	A.....	GT.CT.A.....	GT.....	A.....	ACC.....AAGT.....	.....	2348
.....	C.....	C.....	T.....	AC.....	GGTAC.....	A.....	GT.CT.A.....	GT.....	A.....	ACC.....AAGT.....	.....	2348
.....	C.....	C.....	TT.....	AC.....	GGT.C.....	A.....	G.ACT.A.....	A.....	GT.....	ACC.....AAGT.....	.....	2359
.....	C.....	C.....	TT.....	AC.....	GGT.C.....	A.....	G.ACT.A.....	A.....	GT.....	ACC.....AAGT.....	.....	2358
.....	C.....	C.....	T.....	GC.....	C.GA.C.....	A.....	G.TC.CAG.....	AT..A.....	A.....	ACA.....ACGT.....	.....	2358
.....	C.....	C.....	G.....	AC.....	AC.....	T.....	GT.....	C.....	A.....	AA.....	TT.....	2353
.....	C.....	C.....	T.....	AC.....	AC.....	GT.....	GT.....	C.....	A.....	T.....	.....	2373

[illegible]

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:15 PM

	2380	2390	2400	2410	2420	2430	2440	2450	2460	2470	2480
Baebillia 23S.SEQ	GA.....TC..G..T.....	.....C..C.....	.....C..C.....	.....C..C.....	.....T..CT.C.....	.....C..C.....	.....C..C.....	.....G..AG. 2518
Banthracis 23S.SEQ	GA.....TC..G..T.....	.....C..C.....	.....C..C.....	.....C..C.....	.....T..CT.C.....	.....C..C.....	.....C..C.....	.....G..AG. 2513
Efacaelis 23S.SEQ	GA.....TC..G..T.....	.....C..C.....	.....C..C.....	.....C..C..T.....	.....T..CT.C.....	.....C..C.....	.....C..C.....	.....G..AG. 2502
Llactis 23S.SEQ	.AG.....CT..A..T.....	.....A..C..C.....	.....C..C.....	.....C..C.....	.....T..CT.C.....	.....C..C.....	.....C..C.....	.....G..AG. 2492
Imonocytogenes 23S.SEQ	GA.....TC..G..T.....	.....C..C.....	.....C..C.....	.....C..C.....	.....T..CT.C.....	.....C..C.....	.....C..C.....	.....G..AG. 2523
Saureus 23S.SEQ	GT.....AC..A..T.....	.....C..C.....	.....C..C.....	.....C..C.....	.....T..CT.C.....	.....C..C.....	.....C..C.....	.....G..AG. 2517
Smutans 23S.SEQ	GA.....TC..G..T.....	.....A..C..T.....	.....C..C..T.....	.....C..C..T.....	.....T..CT.C.....	.....C..C.....	.....C..C.....	.....G..AG. 2490
Spneumoniae 23S.SEQ	GA.....TC..G..T.....	.....C..C.....	.....C..C.....	.....C..C..T.....	.....T..CT.C.....	.....C..C.....	.....C..C.....	.....G..AG. 2492
Spyogenes 23S.SEQ	GA.....TC..G..T.....	.....A..C.....	.....C..C..T.....	.....C..C..T.....	.....T..CT.C.....	.....C..C.....	.....C..C.....	.....G..AG. 2493
Mavium 23S.SEQ	GA.....TC..G..T.....	.....C..C.....	.....C..C.....	.....G..G.....	.....C..C.....	.....C..C.....	.....C..C.....	.....G..AG. 2493
Mtuberculosis 23S.SEQ	GA.....TC..G..T.....	.....C..C.....	.....C..C.....	.....G..G.....	.....C..C.....	.....C..C.....	.....C..C.....	.....G..AG. 2493
Ecoli 23S.SEQ	GA.....TC..G..T.....	.....C..C.....	.....C..C.....	.....G..G.....	.....C..C.....	.....C..C.....	.....C..C.....	.....G..AG. 2493
Kpneumoniae 23S.SEQ	GA.....TC..G..T.....	.....C..C.....	.....C..C.....	.....G..G.....	.....C..C.....	.....C..C.....	.....C..C.....	.....G..AG. 2493
Hinfluenzae 23S.SEQ	GA.....TC..G..T.....	.....C..C.....	.....C..C.....	.....G..G.....	.....C..C.....	.....C..C.....	.....C..C.....	.....G..AG. 2493
Bbrochiseptica 23S.SEQ	GA.....TC..G..T.....	.....C..C.....	.....C..C.....	.....G..G.....	.....C..C.....	.....C..C.....	.....C..C.....	.....G..AG. 2493
Bparapertussis 23S.SEQ	GA.....TC..G..T.....	.....C..C.....	.....C..C.....	.....G..G.....	.....C..C.....	.....C..C.....	.....C..C.....	.....G..AG. 2493
Bpertussis 23S.SEQ	GA.....TC..G..T.....	.....C..C.....	.....C..C.....	.....G..G.....	.....C..C.....	.....C..C.....	.....C..C.....	.....G..AG. 2493
Bcepacia 23S.SEQ	GA.....TC..G..T.....	.....C..C.....	.....C..C.....	.....G..G.....	.....C..C.....	.....C..C.....	.....C..C.....	.....G..AG. 2493
Bmallei 23S.SEQ	GA.....TC..G..T.....	.....C..C.....	.....C..C.....	.....G..G.....	.....C..C.....	.....C..C.....	.....C..C.....	.....G..AG. 2493
Bpseudomallei 23S.SEQ	GA.....TC..G..T.....	.....C..C.....	.....C..C.....	.....G..G.....	.....C..C.....	.....C..C.....	.....C..C.....	.....G..AG. 2493
Ngonorrhoeae 23S.SEQ	GA.....TC..G..T.....	.....C..C.....	.....C..C.....	.....G..G.....	.....C..C.....	.....C..C.....	.....C..C.....	.....G..AG. 2493
Neminigitidis 23S.SEQ	GA.....TC..G..T.....	.....C..C.....	.....C..C.....	.....G..G.....	.....C..C.....	.....C..C.....	.....C..C.....	.....G..AG. 2493
Paeruginosa 23S.SEQ	GA.....TC..G..T.....	.....C..C.....	.....C..C.....	.....G..G.....	.....C..C.....	.....C..C.....	.....C..C.....	.....G..AG. 2493
Vcholerae 23S.SEQ	GA.....TC..G..T.....	.....C..C.....	.....C..C.....	.....G..G.....	.....C..C.....	.....C..C.....	.....C..C.....	.....G..AG. 2493
Yenterocolitica 23S.SEQ	GA.....TC..G..T.....	.....C..C.....	.....C..C.....	.....G..G.....	.....C..C.....	.....C..C.....	.....C..C.....	.....G..AG. 2493

FIG. 2B-23

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.

Tuesday, November 27, 2001 4:15 PM

	2490	2500	2510	2520	2530	2540	2550	2560	2570	2580	2590	2600	
Bsubtilis 23S.SEQ	2637
Banthracis 23S.SEQ	2632
Efaealis 23S.SEQ	2621
Llactis 23S.SEQ	2610
Lmonocytogenes 23S.SEQ	2642
Sauteus 23S.SEQ	2636
Smutans 23S.SEQ	2609
Spneumoniae 23S.SEQ	2611
Spyoogenes 23S.SEQ	2612
Mavium 23S.SEQ	2824
Mtuberculosi 23S.SEQ	2847
Ecoli 23S.SEQ	2608
Kpneumoniae 23S.SEQ	2614
Hinfluenzae 23S.SEQ	2569
Bbrochiseptica 23S.SEQ	2571
Bparapertussis 23S.SEQ	2570
Bpertussis 23S.SEQ	2583
Bcepacia 23S.SEQ	2586
Bmallei 23S.SEQ	2586
Bpseudomallei 23S.SEQ	2597
Ngonorrhoeae 23S.SEQ	2596
Neminigitidis 23S.SEQ	2596
Paeruginosa 23S.SEQ	2591
Vcholerae 23S.SEQ	2611
Yenterocolitica 23S.SEQ	2611

FIG. 2B-24

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:15 PM

	2610	2620	2630	2640	2650	2660	2670	2680	2690	2700	2710	2720	
Bsubtilis 23S.SEQ	.....C.T.C.	.....TA	.....A.TT	.....A.A	.....TC.T	.....CA	.....C.G	.....A.CA	.....TC	.....G	.....TC	.....TG	TG 2755
Banthracis 23S.SEQ	.....C.T	.....TA	.....A.TT	.....A.A	.....TC.T	.....GA	.....C.G	.....A.CA	.....TC	.....G	.....TA	.....TG	TG 2750
Efacaelis 23S.SEQ	.....C.T.C	.....TA	.....A.TT	.....A.A	.....TC.T	.....GA	.....TT.C.G	.....A.CA	.....TC	.....G	.....T	.....TG	TG 2739
Llactis 23S.SEQ	.....C.T.C	.....TA	.....A.TT	.....A.A	.....TC.T	.....GA	.....TT.C.G	.....A.CA	.....TC	.....G	.....G	.....TG	TG 2728
Imonocytogenes 23S.SEQ	.....C.T.C	.....TA	.....A.TT	.....A.A	.....TC.T	.....GA	.....A.C.G	.....A.CA	.....TC	.....G	.....G	.....TG	TG 2760
Saureus 23S.SEQ	.....C.T	.....TA	.....A.TT	.....A.A	.....TC.T	.....GA	.....AT.C.T	.....A.CA	.....G	.....C	.....TA	.....TG	TG 2754
Smutans 23S.SEQ	.....C.T.C	.....TA	.....A.TT	.....A.A	.....TC.T	.....GA	.....TT.C.G	.....A.CA	.....TC	.....G	.....TA	.....TG	TG 2727
Spneumonias 23S.SEQ	.....C.T.C	.....TA	.....A.TT	.....A.A	.....TC.T	.....GA	.....TT.C.G	.....A.CA	.....TC	.....G	.....TA	.....TG	TG 2729
Spvogenes 23S.SEQ	.....C.T.C	.....TA	.....A.TT	.....A.A	.....TC.T	.....GA	.....TT.C.G	.....A.CA	.....TC	.....G	.....TA	.....TG	TG 2730
Maviium 23S.SEQ	.....C.T.C	.....TA	.....A.TT	.....A.A	.....TC.T	.....GA	.....TT.C.G	.....A.CA	.....TC	.....G	.....TA	.....TG	TG 2730
Mtuberculosis 23S.SEQ	.....C.T.C	.....TA	.....A.TT	.....A.A	.....TC.T	.....GA	.....TT.C.G	.....A.CA	.....TC	.....G	.....TA	.....TG	TG 2730
Ecoli 23S.SEQ	.....C.T.C	.....TA	.....A.TT	.....A.A	.....TC.T	.....GA	.....TT.C.G	.....A.CA	.....TC	.....G	.....TA	.....TG	TG 2730
Kpneumonias 23S.SEQ	.....C.T.C	.....TA	.....A.TT	.....A.A	.....TC.T	.....GA	.....TT.C.G	.....A.CA	.....TC	.....G	.....TA	.....TG	TG 2730
Hinfluenzae 23S.SEQ	.....C.T.C	.....TA	.....A.TT	.....A.A	.....TC.T	.....GA	.....TT.C.G	.....A.CA	.....TC	.....G	.....TA	.....TG	TG 2730
Bbrochiseptica 23S.SEQ	.....C.T.C	.....TA	.....A.TT	.....A.A	.....TC.T	.....GA	.....TT.C.G	.....A.CA	.....TC	.....G	.....TA	.....TG	TG 2730
Bparapertussis 23S.SEQ	.....C.T.C	.....TA	.....A.TT	.....A.A	.....TC.T	.....GA	.....TT.C.G	.....A.CA	.....TC	.....G	.....TA	.....TG	TG 2730
Bpettussis 23S.SEQ	.....C.T.C	.....TA	.....A.TT	.....A.A	.....TC.T	.....GA	.....TT.C.G	.....A.CA	.....TC	.....G	.....TA	.....TG	TG 2730
Bcepacia 23S.SEQ	.....C.T.C	.....TA	.....A.TT	.....A.A	.....TC.T	.....GA	.....TT.C.G	.....A.CA	.....TC	.....G	.....TA	.....TG	TG 2730
Bmailei 23S.SEQ	.....C.T.C	.....TA	.....A.TT	.....A.A	.....TC.T	.....GA	.....TT.C.G	.....A.CA	.....TC	.....G	.....TA	.....TG	TG 2730
Bpseudomallei 23S.SEQ	.....C.T.C	.....TA	.....A.TT	.....A.A	.....TC.T	.....GA	.....TT.C.G	.....A.CA	.....TC	.....G	.....TA	.....TG	TG 2730
Ngonorrhoeae 23S.SEQ	.....C.T.C	.....TA	.....A.TT	.....A.A	.....TC.T	.....GA	.....TT.C.G	.....A.CA	.....TC	.....G	.....TA	.....TG	TG 2730
Neminigitidis 23S.SEQ	.....C.T.C	.....TA	.....A.TT	.....A.A	.....TC.T	.....GA	.....TT.C.G	.....A.CA	.....TC	.....G	.....TA	.....TG	TG 2730
Paeruginosa 23S.SEQ	.....C.T.C	.....TA	.....A.TT	.....A.A	.....TC.T	.....GA	.....TT.C.G	.....A.CA	.....TC	.....G	.....TA	.....TG	TG 2730
Vcholerax 23S.SEQ	.....C.T.C	.....TA	.....A.TT	.....A.A	.....TC.T	.....GA	.....TT.C.G	.....A.CA	.....TC	.....G	.....TA	.....TG	TG 2730
Yenterocolitica 23S.SEQ	.....C.T.C	.....TA	.....A.TT	.....A.A	.....TC.T	.....GA	.....TT.C.G	.....A.CA	.....TC	.....G	.....TA	.....TG	TG 2730

FIG. 2B-25

Alignment Report of Gram +&- 23S align.MEG, using Clustal method with Weighted residue weight table.
Tuesday, November 27, 2001 4:15 PM

	2730	2740	2750	2760	2770	2780	2790	2800	2810	2820	2830	2840
Baebtilis 23S.SEQ	.....C.G.	.....T.A.	.....T.A.	.....T.A.	.....T.A.	.....T.A.	.....T.A.	.....T.A.	.....T.A.	.....T.A.	.....T.A.	.....T.A.
Banthracis 23S.SEQ	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.
Efacellis 23S.SEQ	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.
Llactis 23S.SEQ	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.
Lmonocytogenes 23S.SEQ	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.
Saureus 23S.SEQ	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.
Smutans 23S.SEQ	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.
Spneumonae 23S.SEQ	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.
Spynones 23S.SEQ	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.
Maviun 23S.SEQ	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.
Mtuberculosis 23S.SEQ	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.
Ecoli 23S.SEQ	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.
Kneumonae 23S.SEQ	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.
Hinfluenzae 23S.SEQ	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.
Bbrochiseptica 23S.SEQ	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.
Bparapertussis 23S.SEQ	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.
Bpertussis 23S.SEQ	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.
Bcepacia 23S.SEQ	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.
Bmallei 23S.SEQ	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.
Bpseudomallei 23S.SEQ	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.
Ngonorrhoeae 23S.SEQ	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.
Neminigititidis 23S.SEQ	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.
Paeruginosa 23S.SEQ	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.
Vcholerae 23S.SEQ	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.
Yenterocolitica 23S.SEQ	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.	.....G.

FIG. 2B-26

	2850	2860	2870	2880	2890	2900
Seubutillis 23S.SEQ	G...T.TG..A.CA.A.G...	G...A.A...	CG.T...	AG.A...	A-T	2927
Banthracis 23S.SEQ	G...ATG.T..CMT..G...	G...GAA...	AG.T...	AG.A...	A-T	2922
Efascalis 23S.SEQ	G...OCT..T...AGT.G...	GG...AA...	CGGT...	AG.A...	A-A	2912
Llactis 23S.SEQ	G...A.TT...CA.T.G...	GG...AA...	CGGT...	AG.A...	T..A-A	2898
monocytogenes 23S.SEQ	G...T.TT...A.A.G...	GG...AA...	CG.T...	AG.A...	A-A	2932
Saureus 23S.SEQ	G...ATG.T..CMT..G...	G...GAA...	CG.T...	A.A...	T.A-A	2923
Smutans 23S.SEQ	G...TT.T..CA...GA...	GG...AA...	CGGT...	AG.A...	T..A-A	2900
Spneumoniae 23S.SEQ	G...T.TG...CA.A.GT...	GG...TAA...	AGGT...	AG.A...	T.A-A	2902
Spynogenes 23S.SEQ	G...T.TT...A.A.GT...	GG...TAA...	AGGT...	AG.A...	T...	2901
Mavium 23S.SEQ	G...T.TA...A..GC...	G...T.C...	CTGG...	A.A...		3107
Ntuberculosis 23S.SEQ	G...T...TA...G.GT...	GG...T..G...	COGG...	A.AA...	-AACAA	3138
Ecoli 23S.SEQ	GTAAAGCGAGGATCGCTTGAGCTAAACCGTACTAATGAAACCGTGGGCTTAACTTT					2903
Kpneumoniae 23S.SEQ	.....T.AT.T..GT.A...	AA...	TGC...	A...		2897
Infuenzae 23S.SEQ	.....TA.....A.....A.....	TGC...	T.C.			2865
Bbrochiseptica 23S.SEQ	G.....TA.....A.....A.....	TGC...	G.T.C.			2865
Bparaptusis 23S.SEQ	G.....TA.....A.....A.....	TGC...	G.T.C.			2864
Bpertussis 23S.SEQ	G.....TA.....C.....T.A.A...	TGC...	A...	G.T.C.		2878
Bcepacia 23S.SEQ	.....TA.....C.....A.....	TGC...	AC...	G.T.C.A		2882
Bmallei 23S.SEQ	.....TA.....C.....A.....	TGC...	AC...	G.T.C.A		2882
Bpseudomallei 23S.SEQ	.....G.TA.C...GA.....CA...	TGC...	G.T.C.			2890
Ngonorrhoeae 23S.SEQ	.....G.TA.C...GA.....CA...	TGC...	G.T.C.			2891
Neminigitidis 23S.SEQ	.....TT.T..G.....A.....	TGC...	G...			2886
Peeruginosa 23S.SEQ	.....TT.T..G.....A.....	TGC...	G...			2886
Vcholerae 23S.SEQ	.....TT.T..G.....A.....	TGC...	G...			2906
Yenterocolitica 23S.SEQ	.....GAGTGG.....					2906

Decoration 'Decoration #1': Hide (as '.') residues that match Ecoli 23S.SEQ exactly.

FIG. 2B-27

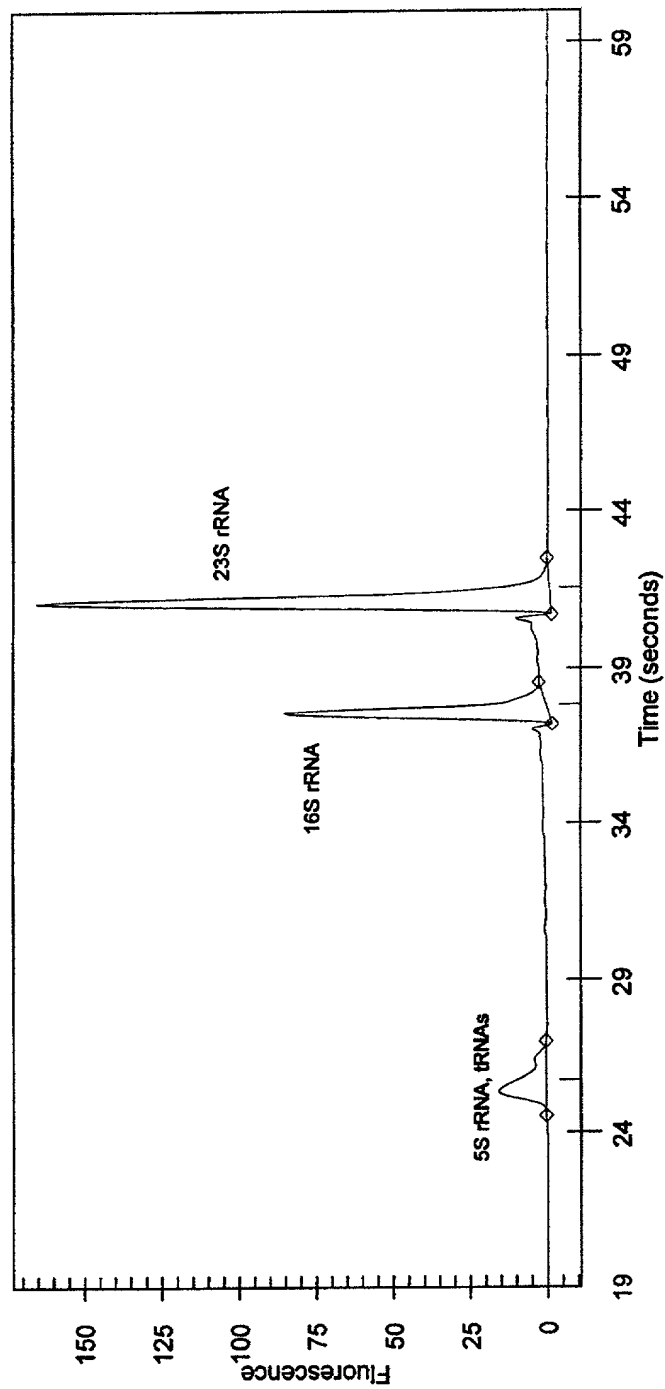


FIG. 3

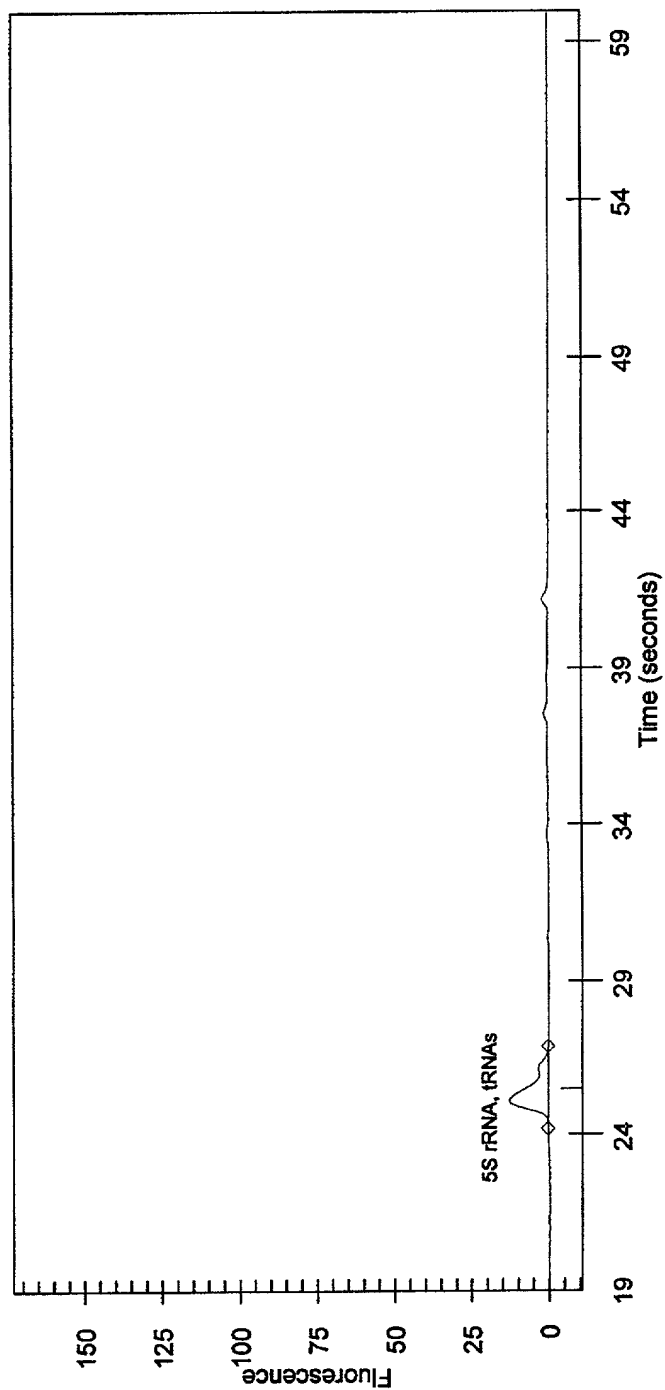


FIG. 4

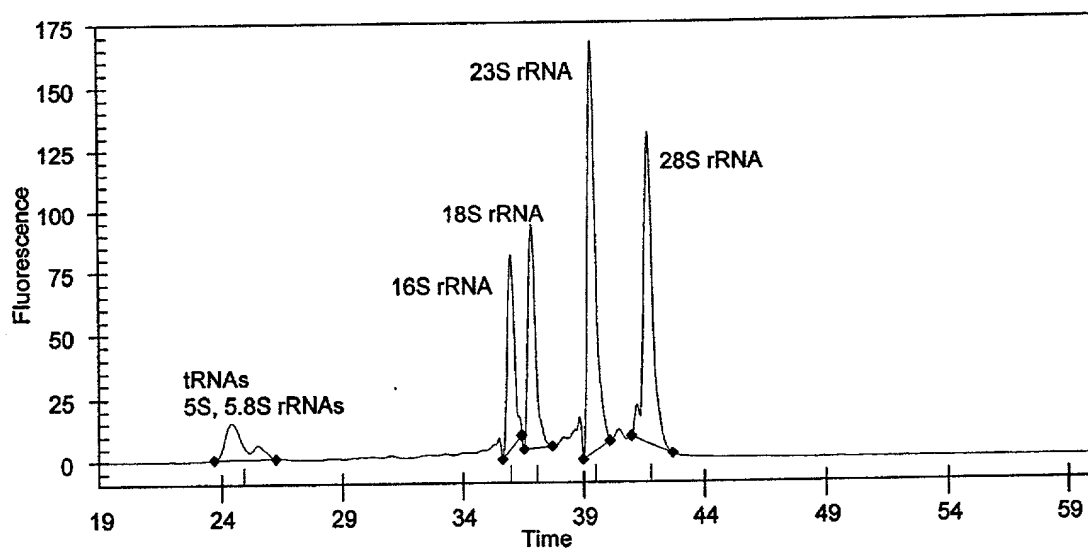


FIG. 5A

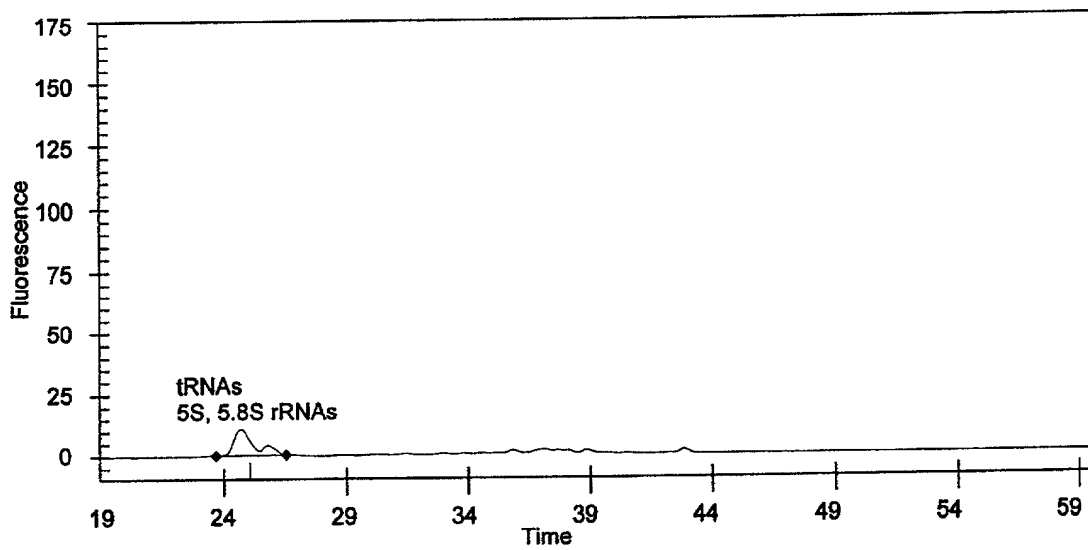


FIG. 5B

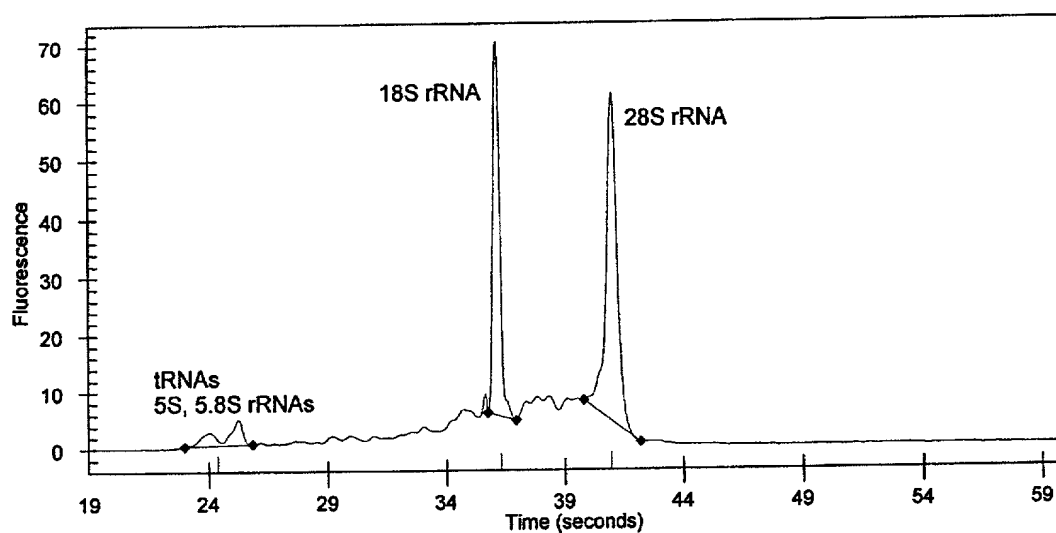


FIG. 6A

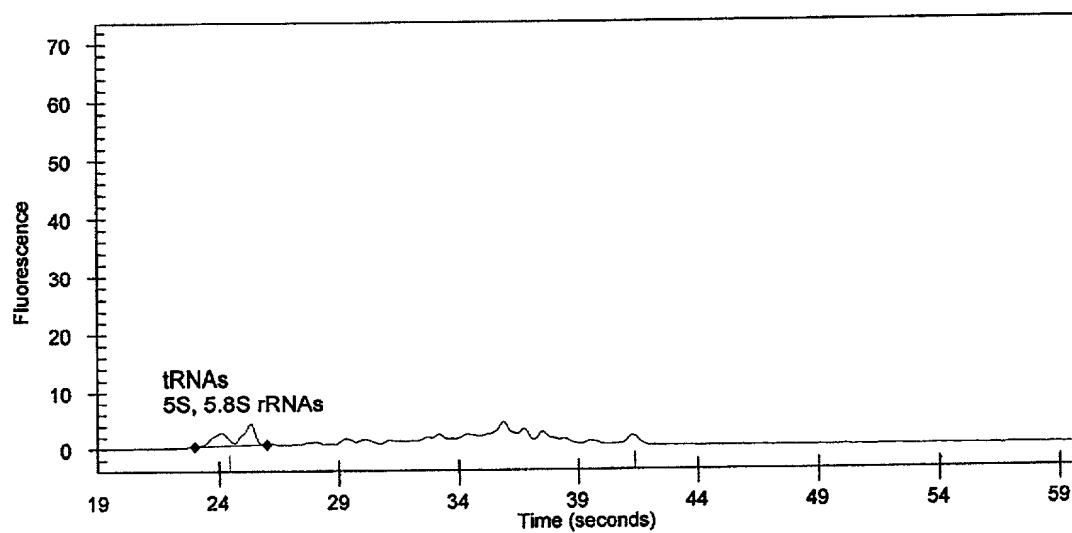


FIG. 6B

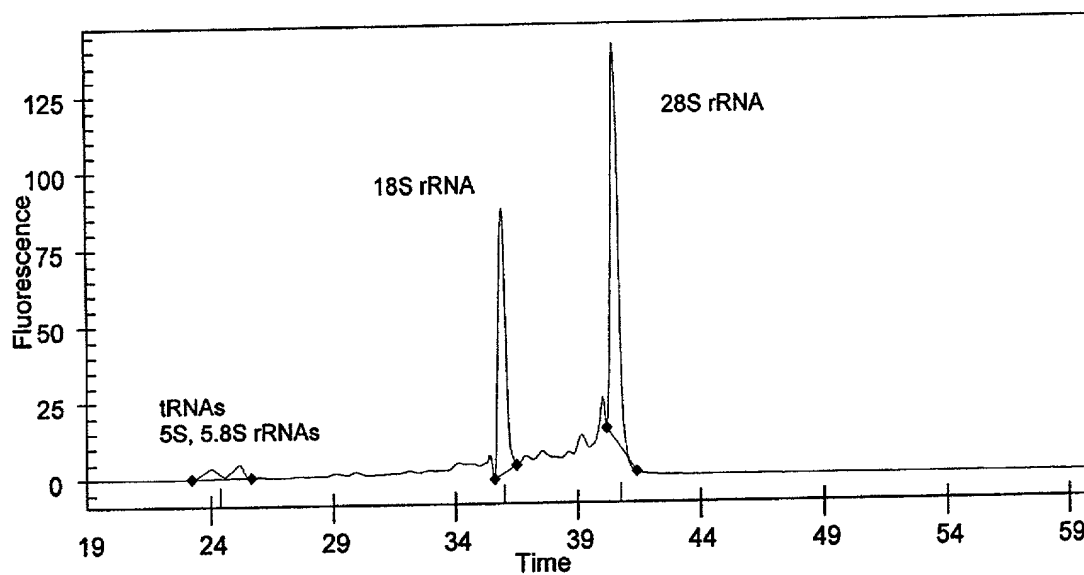


FIG. 7A

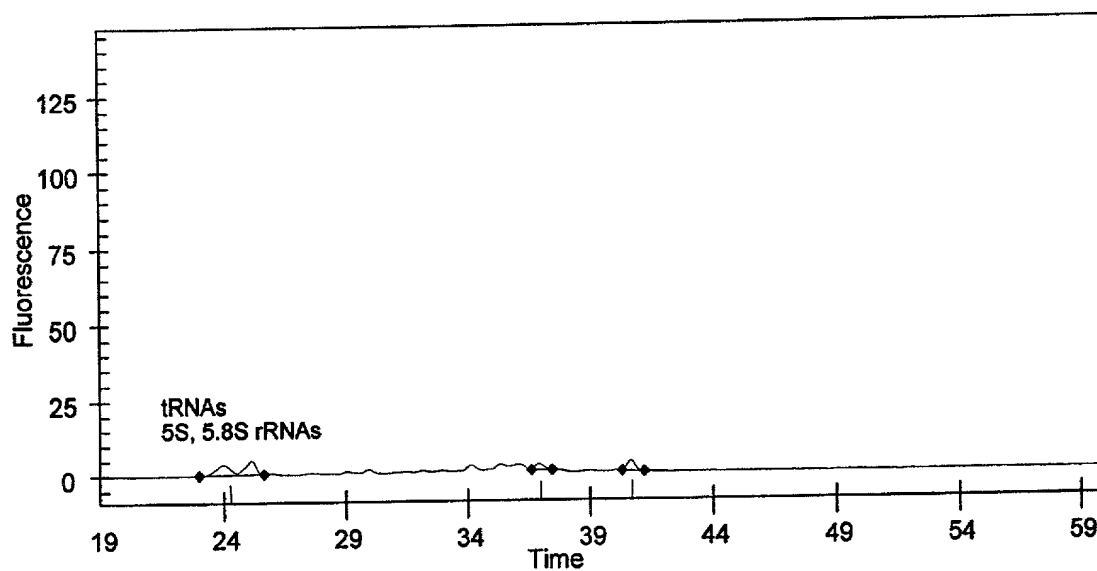


FIG. 7B

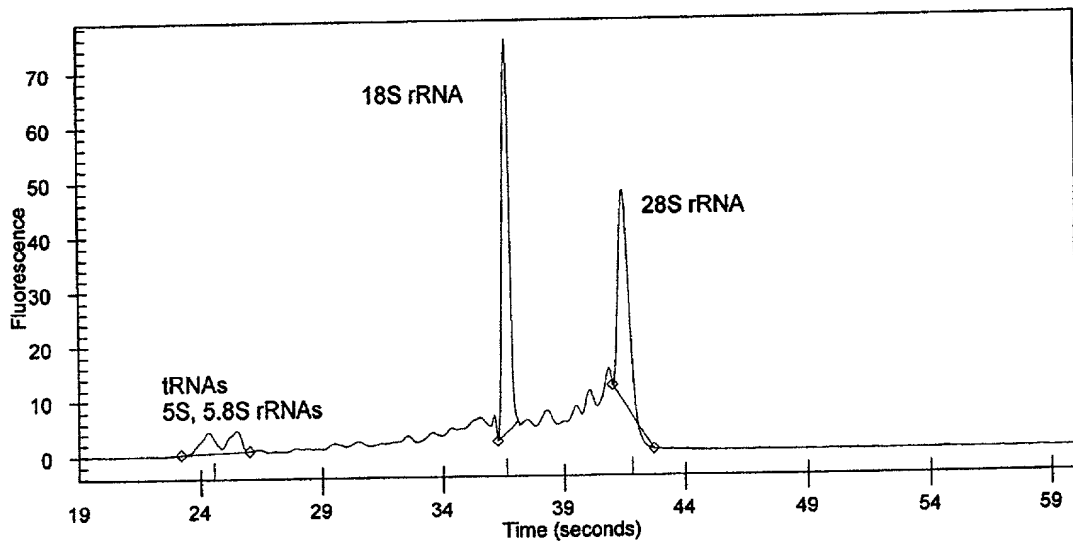


FIG. 8A

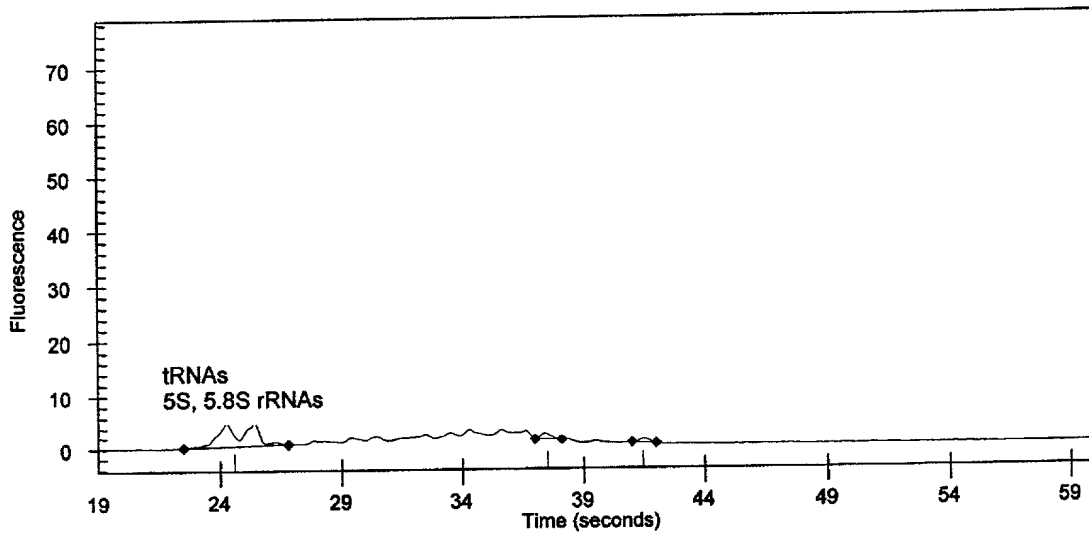


FIG. 8B